

FIG. I

EXAMPLE 1 (PARALLEL DIRECTION)

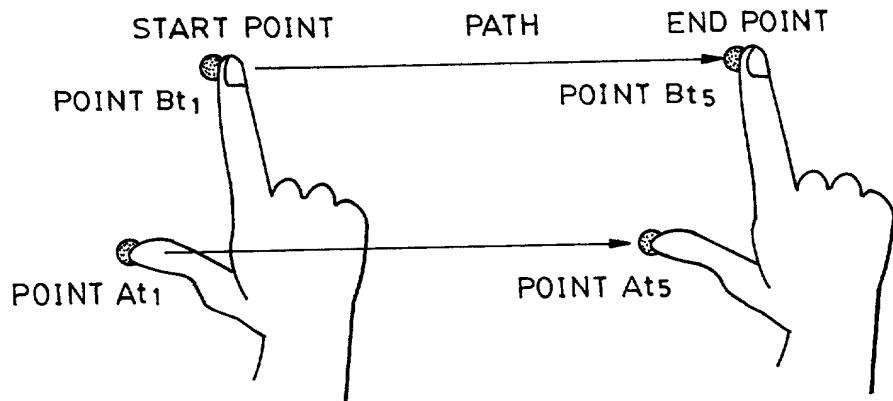


FIG. 2A

EXAMPLE 2 (INWARD DIRECTION)

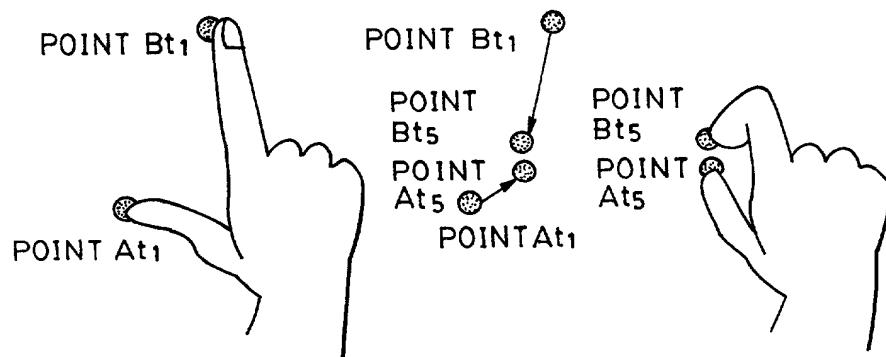


FIG. 2B

EXAMPLE 3 (OUTWARD DIRECTION)

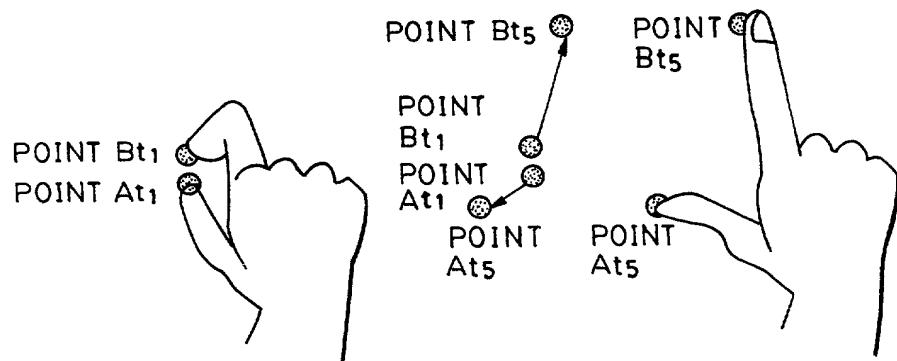


FIG. 2C

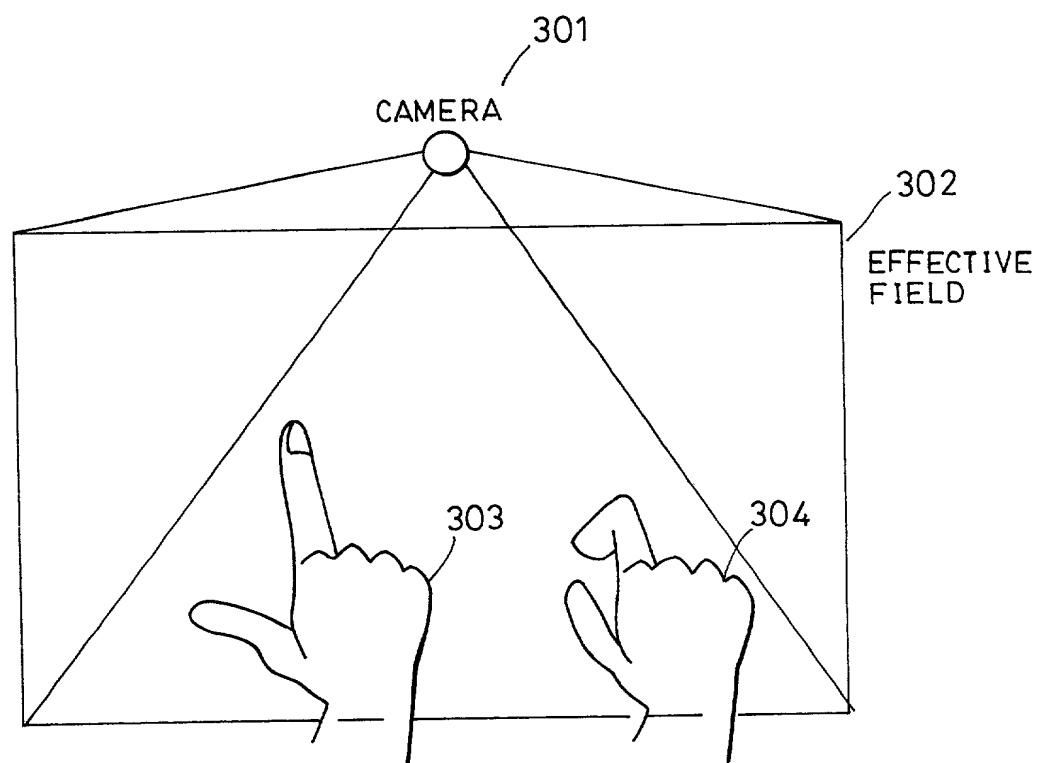


FIG. 3

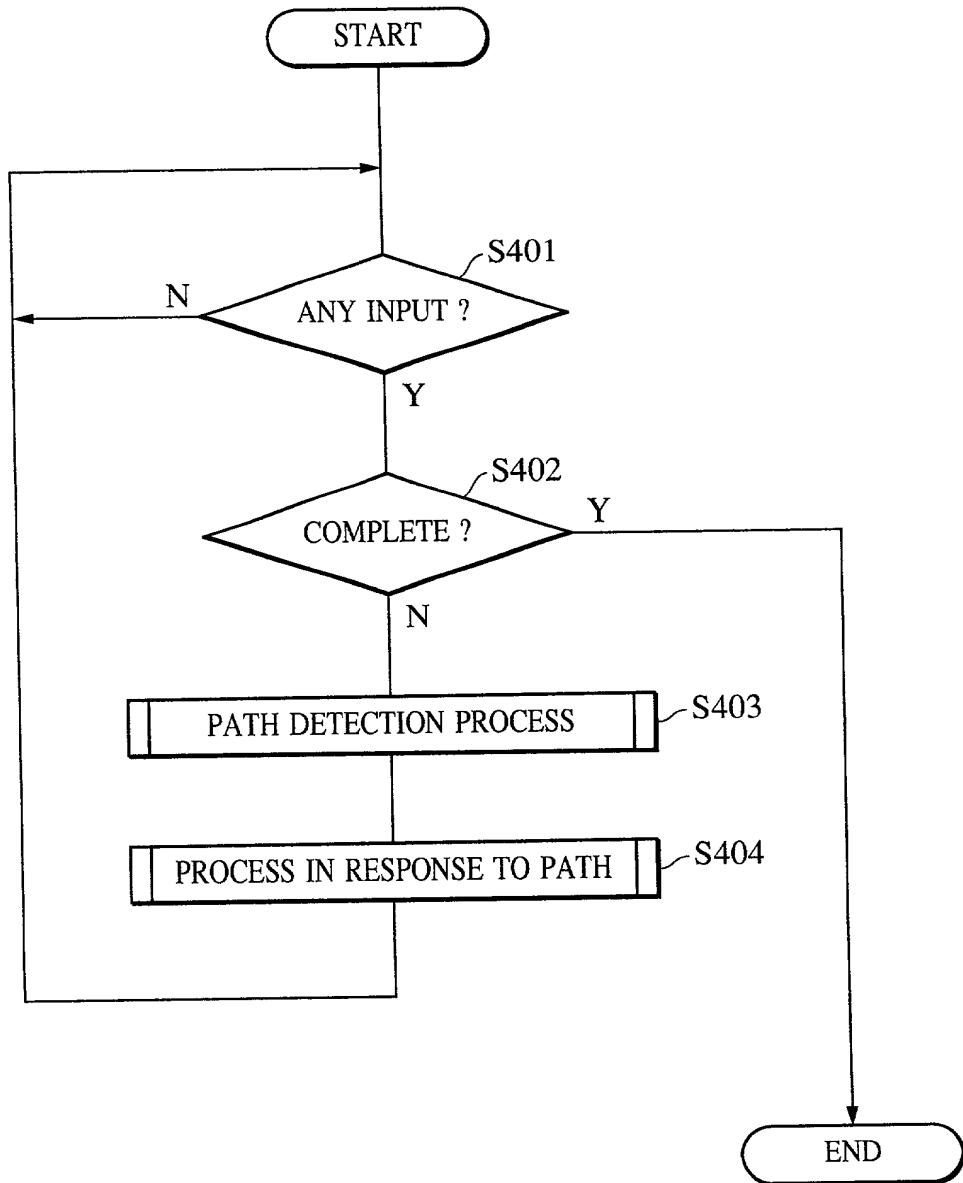


FIG. 4

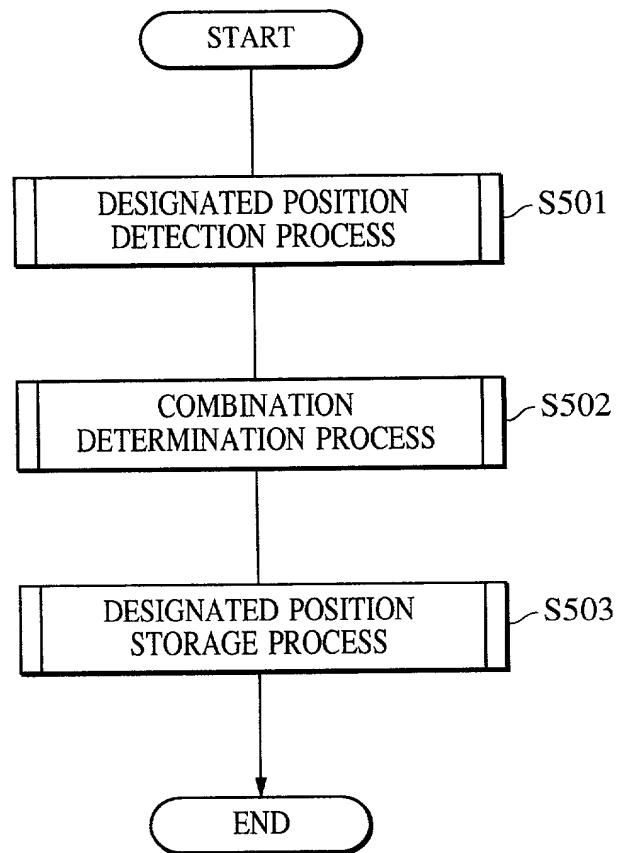
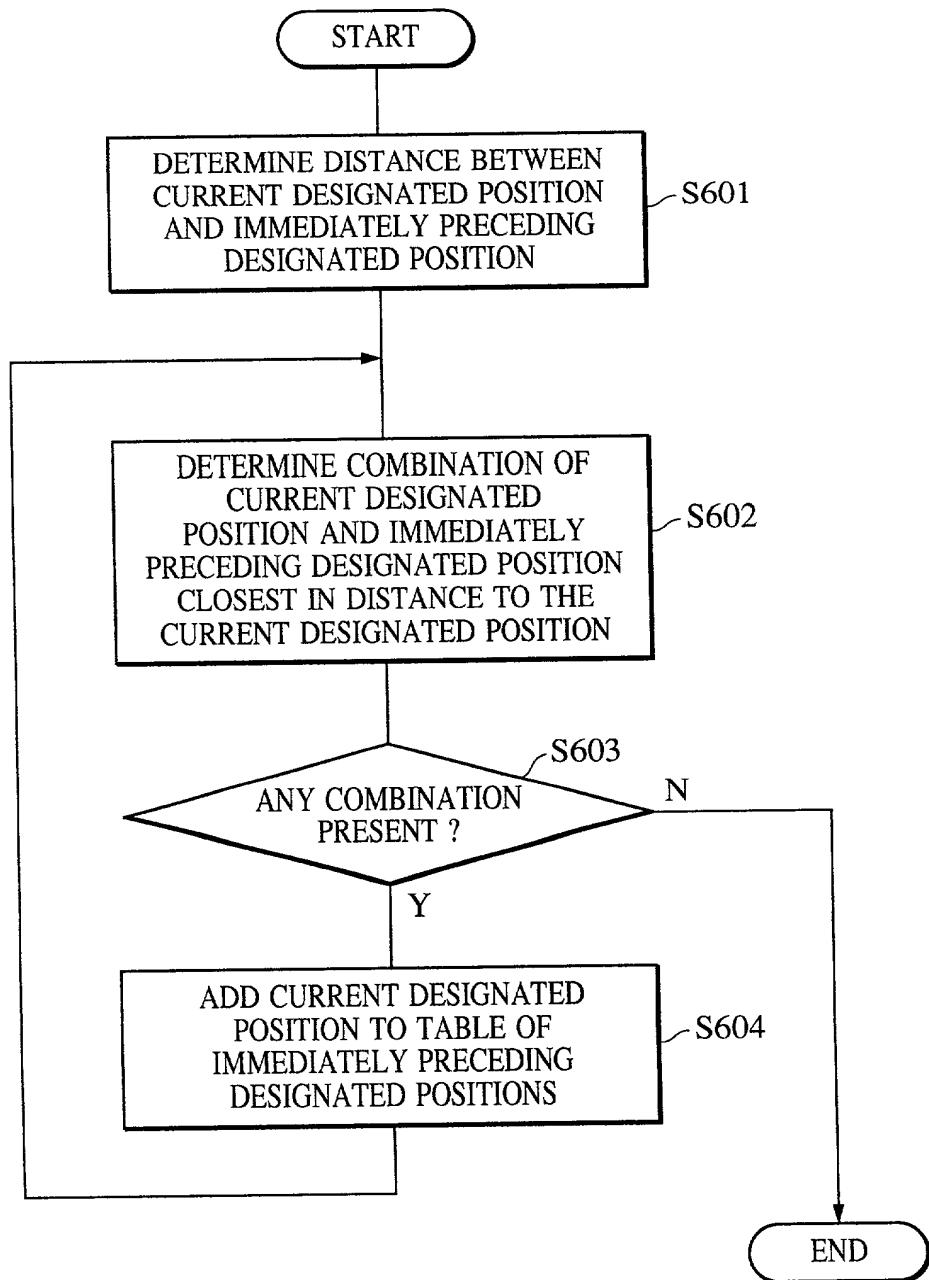


FIG. 5



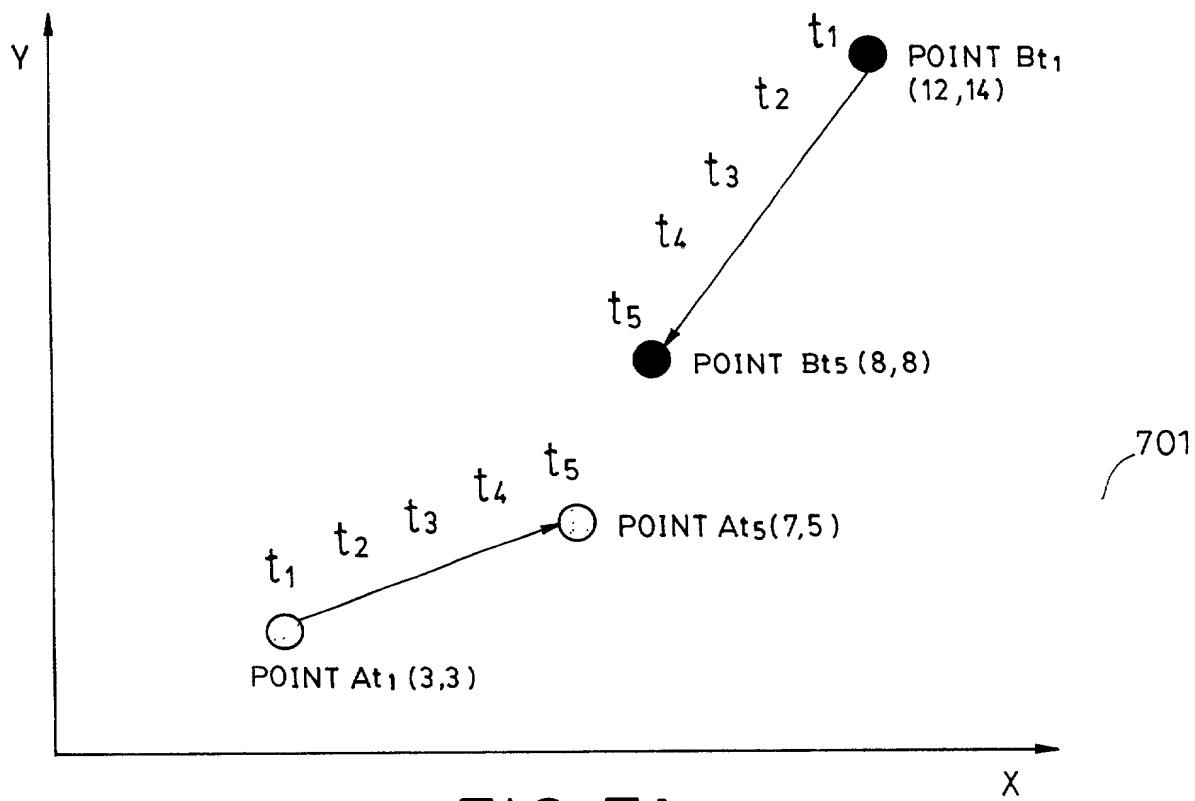


FIG. 7A

TABLE STORING POSITION DATA

POSITION COORDINATE  
DATA AT POINT A

	X	Y
t <sub>1</sub>	3	3
t <sub>2</sub>	4	3.5
t <sub>3</sub>	5	4
t <sub>4</sub>	6	4.5
t <sub>5</sub>	7	5

702

POSITION COORDINATE  
DATA AT POINT B

	X	Y
t <sub>1</sub>	12	14
t <sub>2</sub>	11	12.5
t <sub>3</sub>	10	11
t <sub>4</sub>	9	10
t <sub>5</sub>	8	9

703

FIG. 7B

FIG. 7C

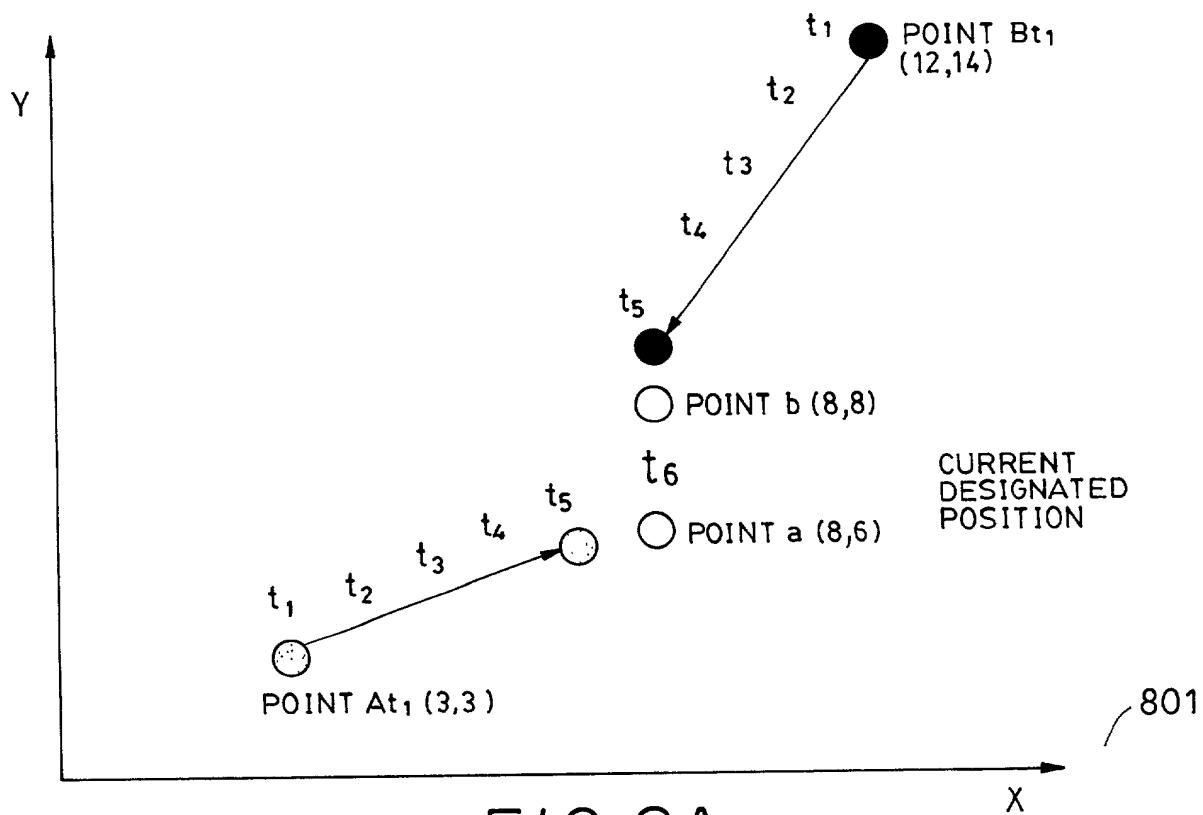


FIG. 8A

CURRENT DESIGNATED POSITION DATA (AT t<sub>6</sub>)

	X	Y	802
a	8	6	
b	8	8	

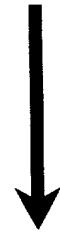
FIG. 8B

CURRENT DESIGNATED POSITION DATA

901

	X	Y
a	8	6
b	8	8

FIG. 9A

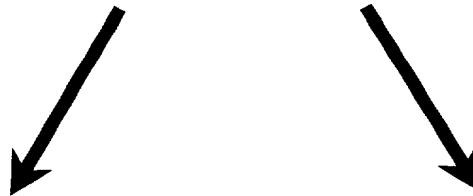


DISTANCE TO IMMEDIATELY PRECEDING DESIGNATED POSITION

902

	X	Y	DISTANCE TO DESIGNATED POSITION A	DISTANCE TO DESIGNATED POSITION B
a	8	6	1.414	4.123
b	8	8	3.601	1.000

FIG. 9B



DESIGNATED POSITION DATA AT EACH TIME POINT

903

	X	Y
$t_1$	3	3
$t_2$	4	3.5
$t_3$	5	4
$t_4$	6	4.5
$t_5$	7	5
$t_6$	8	6

FIG. 9C

904

	X	Y
$t_1$	12	14
$t_2$	11	12.5
$t_3$	10	11
$t_4$	9	10
$t_5$	8	9
$t_6$	8	8

FIG. 9D

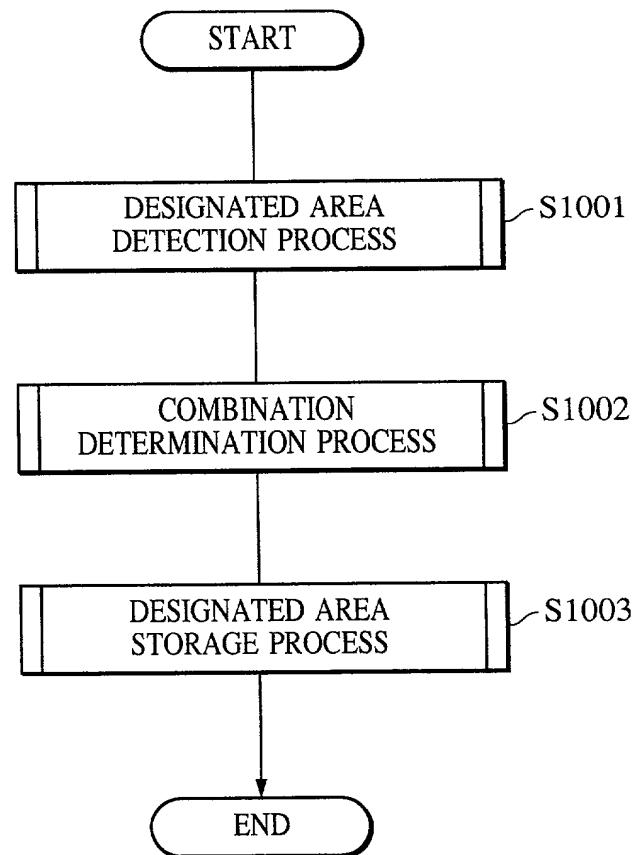


FIG. 10

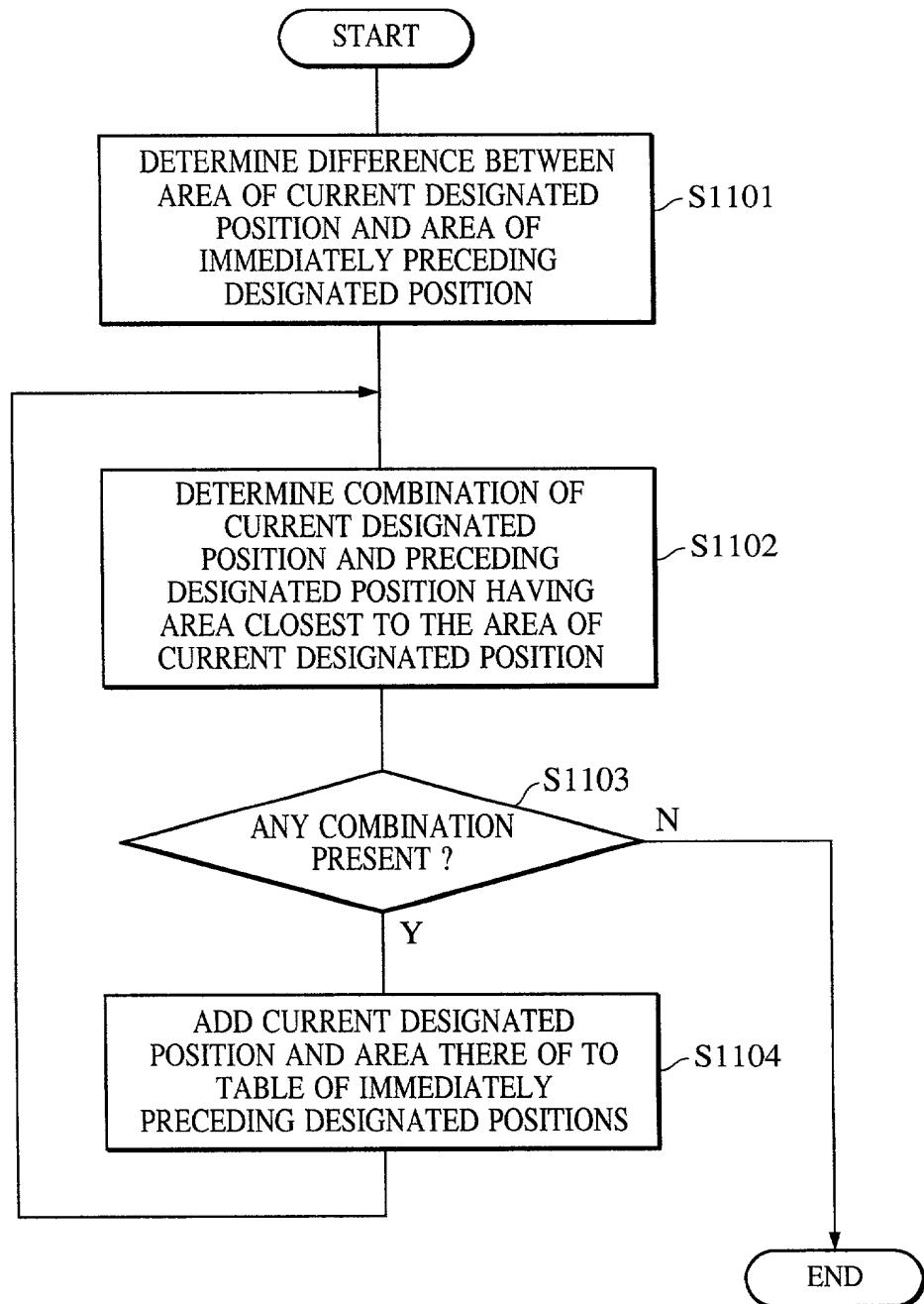


FIG. 11

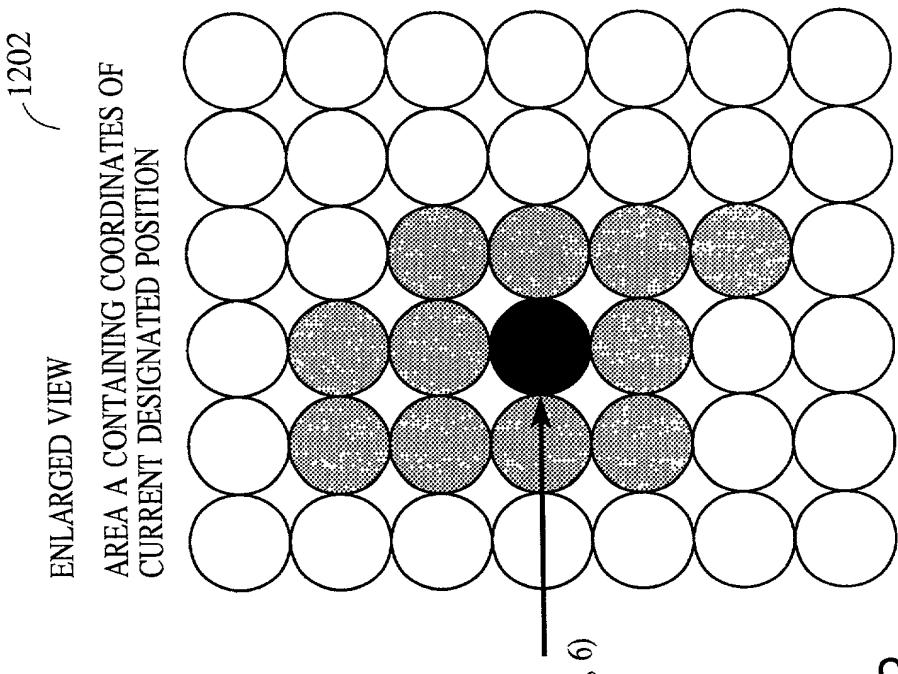
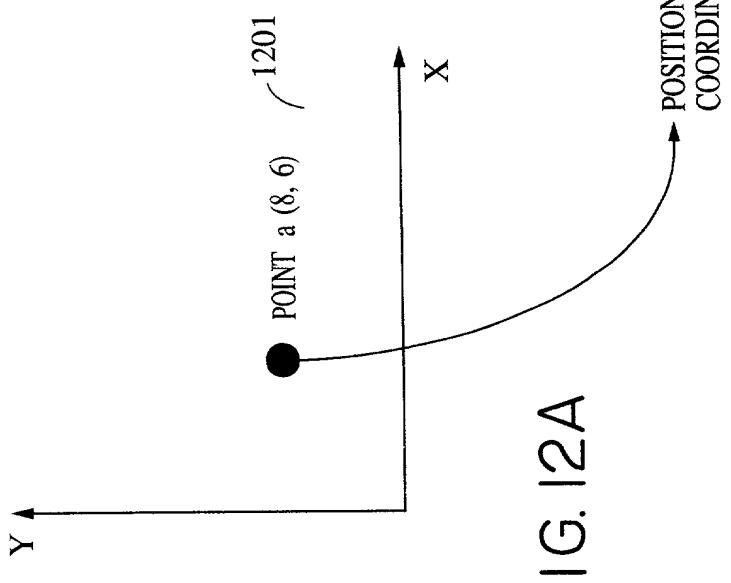


FIG. I2B

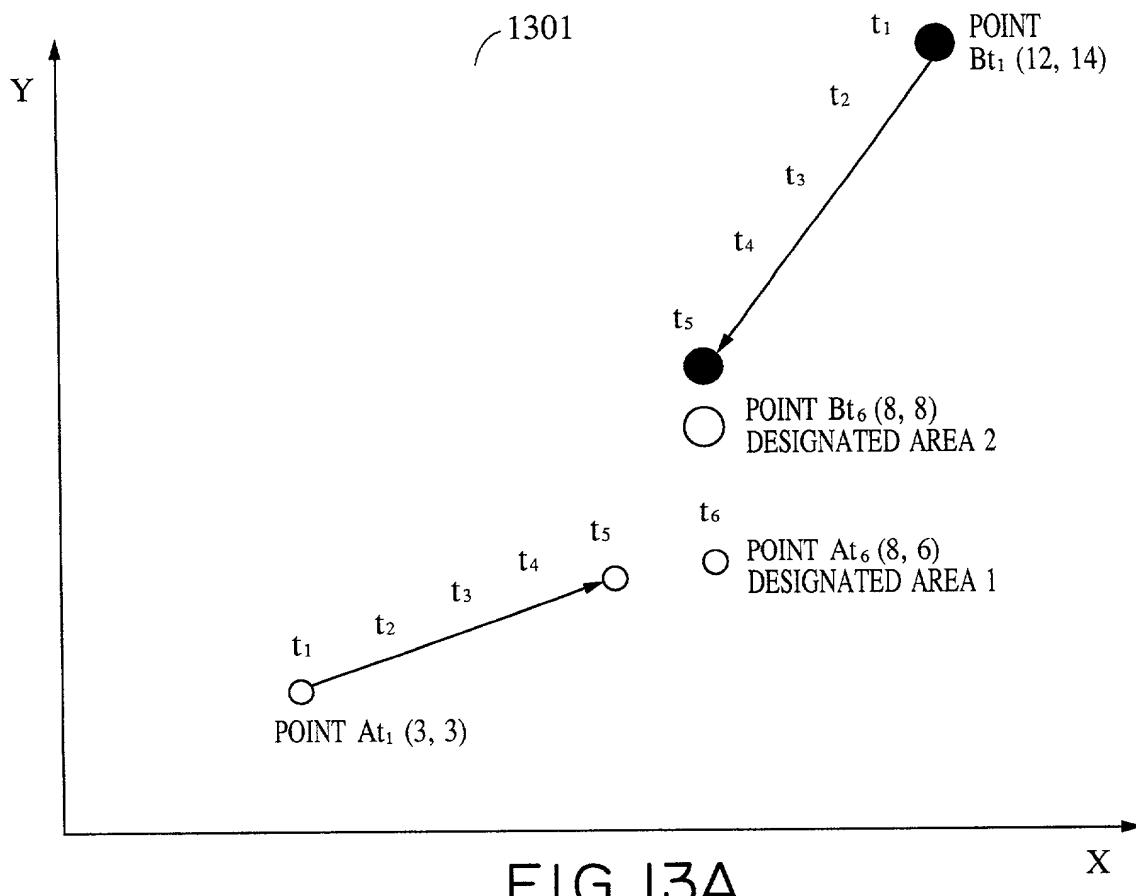


FIG. 13A

TABLES STORING DESIGNATED AREA DATA

AREA DATA AT POINT A

	X	Y	AREA
t <sub>1</sub>	3	3	12.5
t <sub>2</sub>	4	3.5	12.2
t <sub>3</sub>	5	4	12.5
t <sub>4</sub>	6	4.5	12.0
t <sub>5</sub>	7	5	11.0

AREA DATA AT POINT B

	X	Y	AREA
t <sub>1</sub>	12	14	19.5
t <sub>2</sub>	11	12.5	19.5
t <sub>3</sub>	10	11	20.0
t <sub>4</sub>	9	10	20.0
t <sub>5</sub>	8	9	20.0

FIG. 13B

FIG. 13C

CURRENT DESIGNATED AREA DATA (AT t<sub>6</sub>)

	X	Y	AREA
a	8	6	11.5
b	8	8	20.0

FIG. 13D

CURRENT AREA DATA (AT  $t_6$ )

	X	Y	AREA
a	8	6	11.5
b	8	8	20.0

1401

FIG. 14A

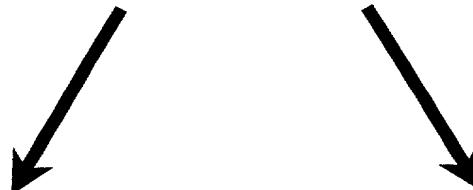


DIFFERENCE BETWEEN CURRENT AND IMMEDIATELY  
PRECEDING DESIGNATED AREAS

	X	Y	AREA	DIFFERENCE FROM DESIGNATED AREA A	DIFFERENCE FROM DESIGNATED AREA B
a	8	6	11.5	0.5	9.0
b	8	8	20.0	9.0	0.5

1402

FIG. 14B



TABLES STORING DESIGNATED AREA DATA

	X	Y	AREA
$t_1$	3	3	12.5
$t_2$	4	3.5	12.2
$t_3$	5	4	12.5
$t_4$	6	4.5	12.0
$t_5$	7	5	11.0
$t_6$	8	6	11.5

1403

	X	Y	AREA
$t_1$	12	14	19.5
$t_2$	11	12.5	19.5
$t_3$	10	11	20.0
$t_4$	9	10	20.0
$t_5$	8	9	20.0
$t_6$	8	8	20.5

1404

FIG. 14C

FIG. 14D

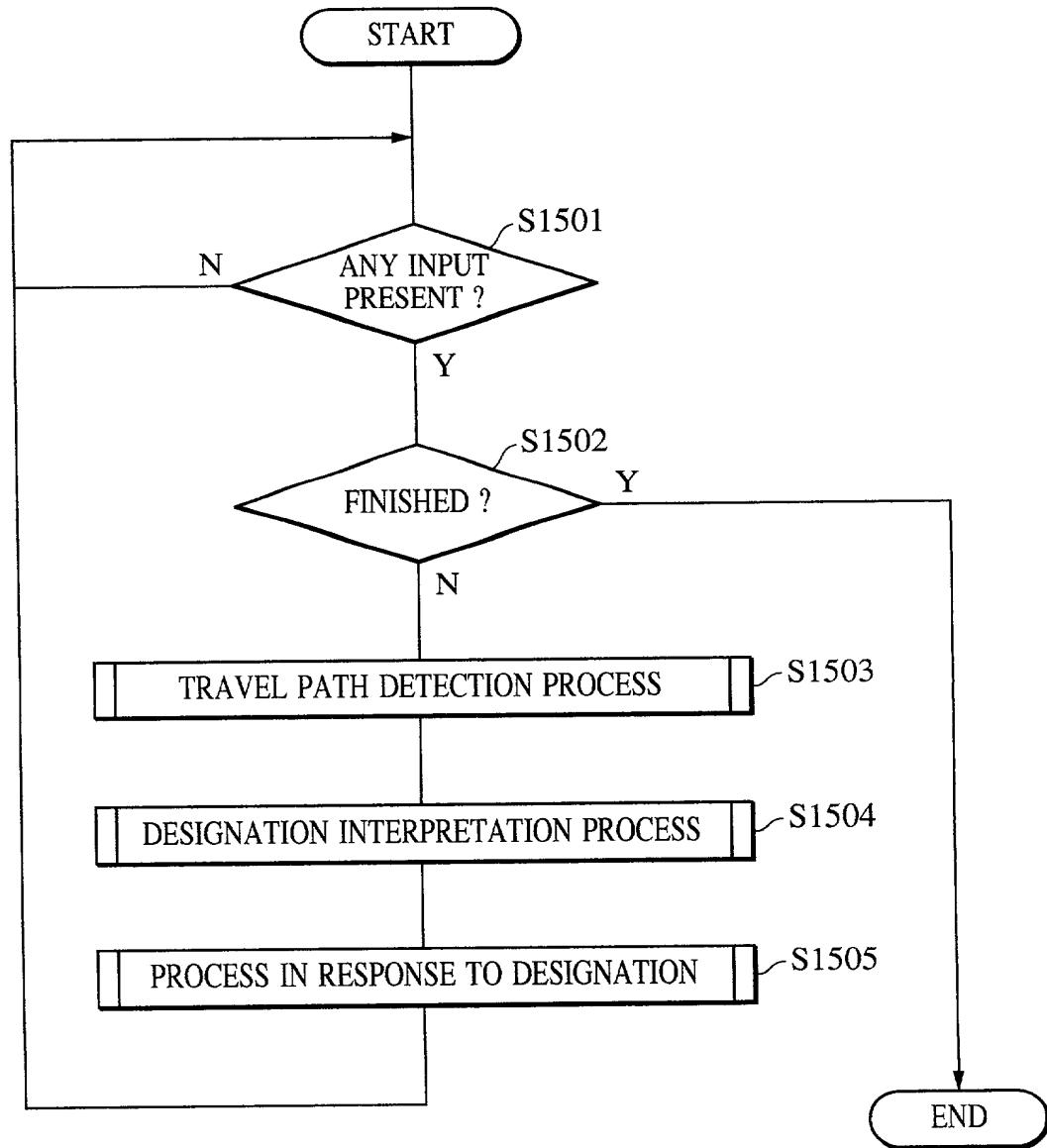


FIG. 15

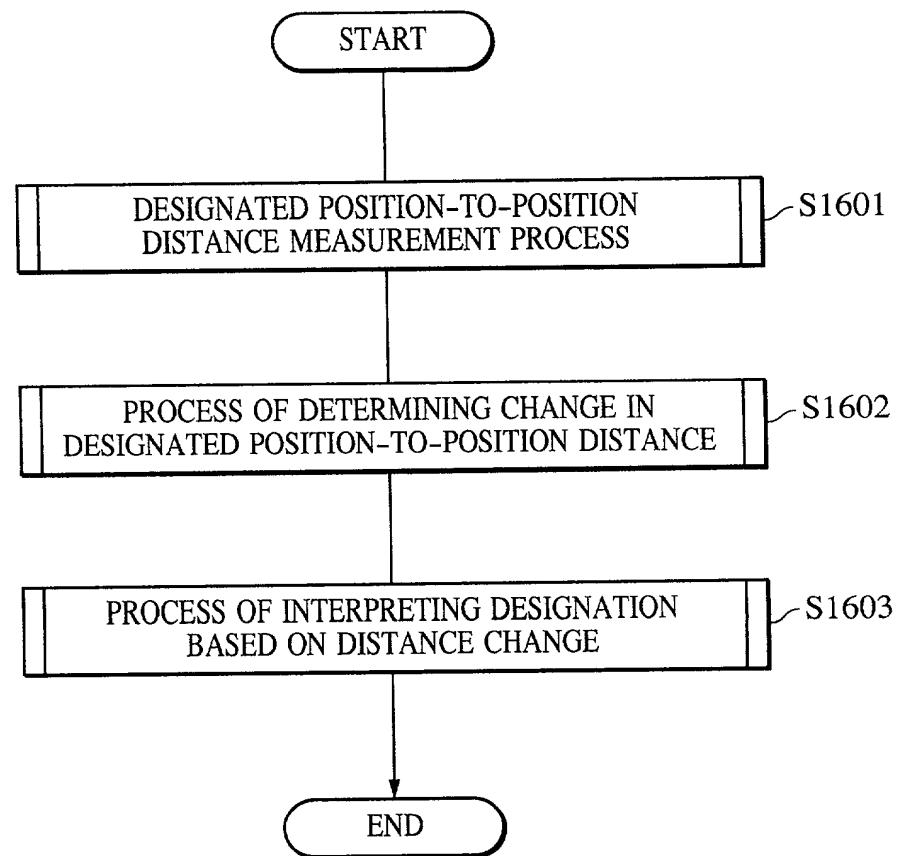


FIG. 16

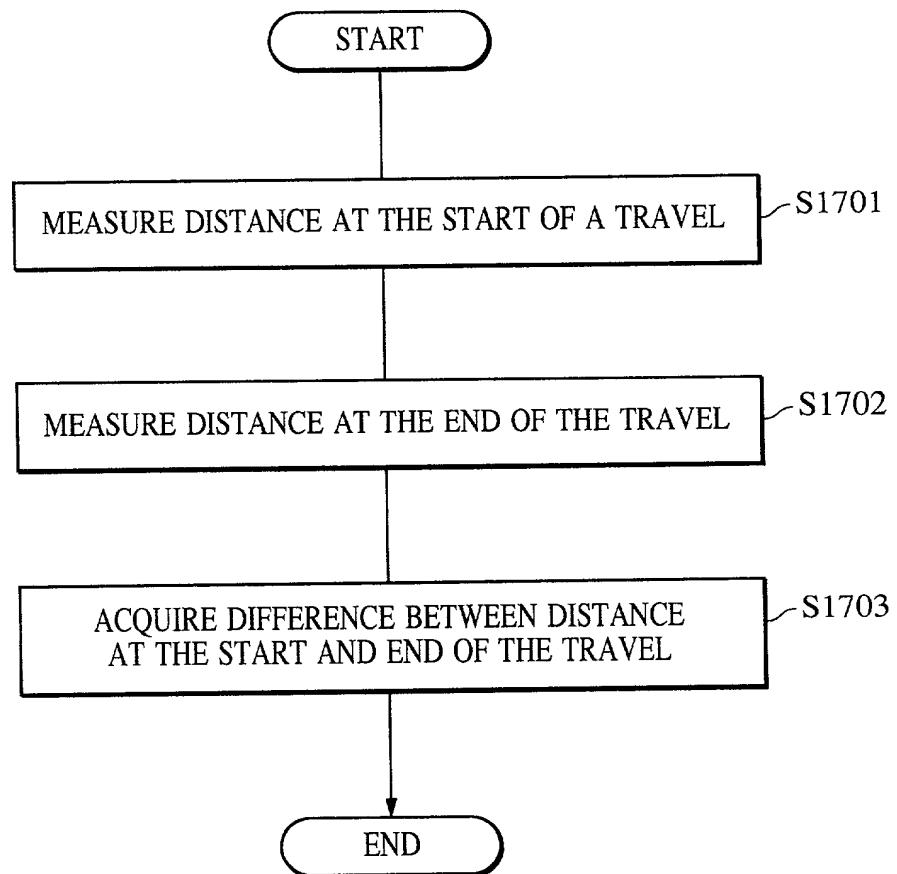


FIG. 17

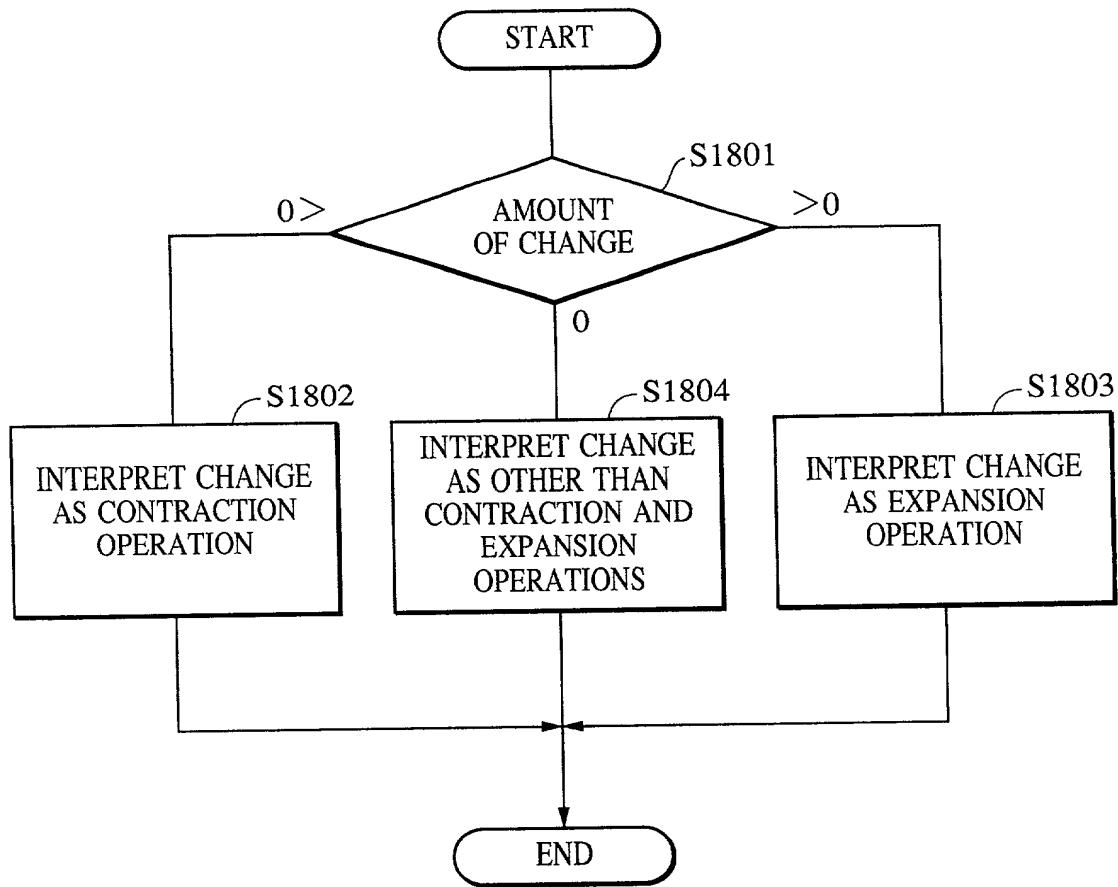
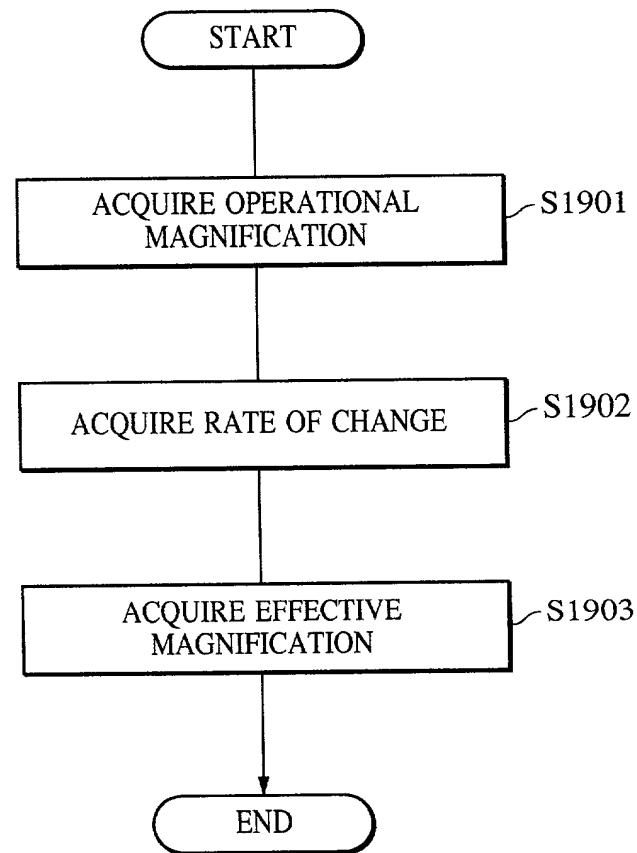


FIG. 18



EFFECTIVE MAGNIFICATION =  $100 - (100 - \text{OPERATIONAL MAGNIFICATION}) \times \text{RANGE OF CHANGE } \alpha$

FIG. 19

CONTRACTION OPERATION

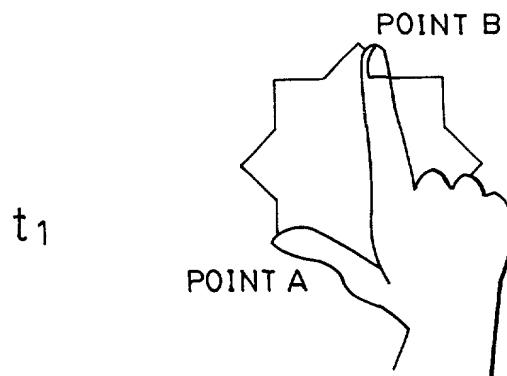


FIG. 20A

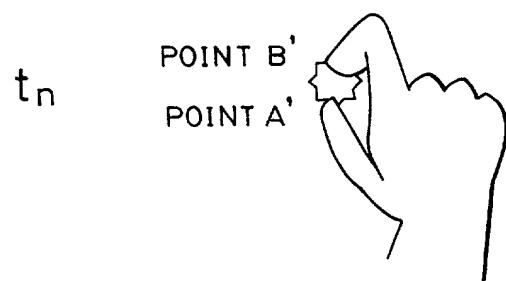


FIG. 20B

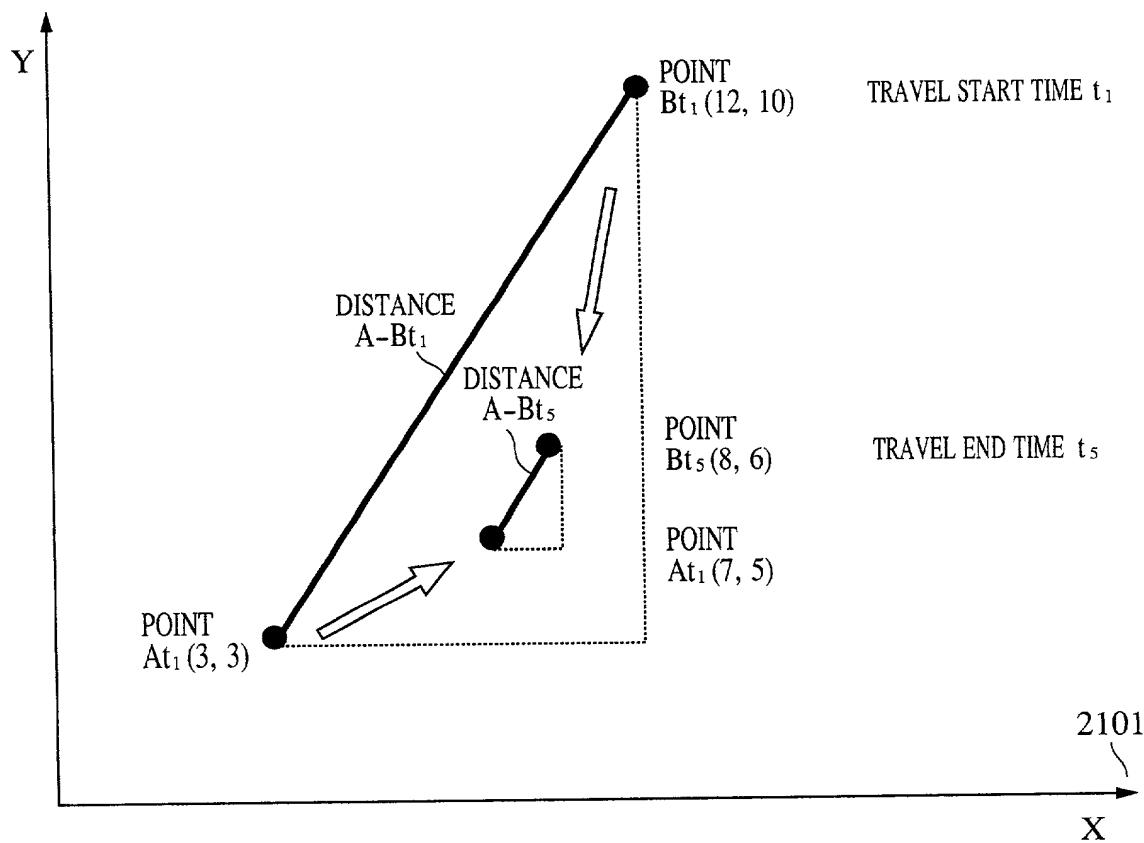


FIG. 21A

DISTANCE BETWEEN DESIGNATED POSITIONS A AND B,  
AND AMOUNT OF CHANGE

	DISTANCE BETWEEN A AND B	MAGNIFICATION (DISTANCE t <sub>n</sub> /DISTANCE t <sub>1</sub> )
t <sub>1</sub>	15.000	100%
t <sub>2</sub>	11.011	73%
t <sub>3</sub>	7.810	52%
t <sub>4</sub>	3.905	26%
t <sub>5</sub>	1.118	7%

2102

FIG. 21B

EXPANSION OPERATION

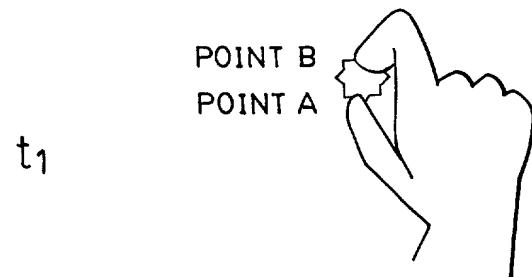


FIG. 22A

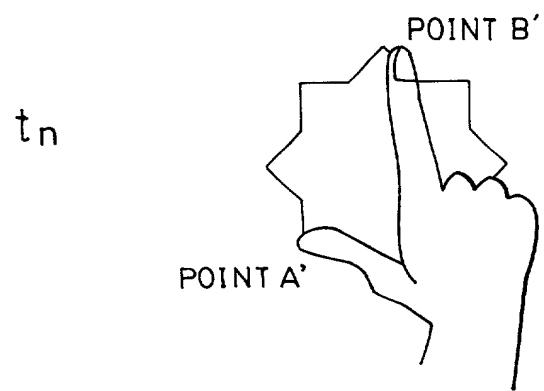


FIG. 22B

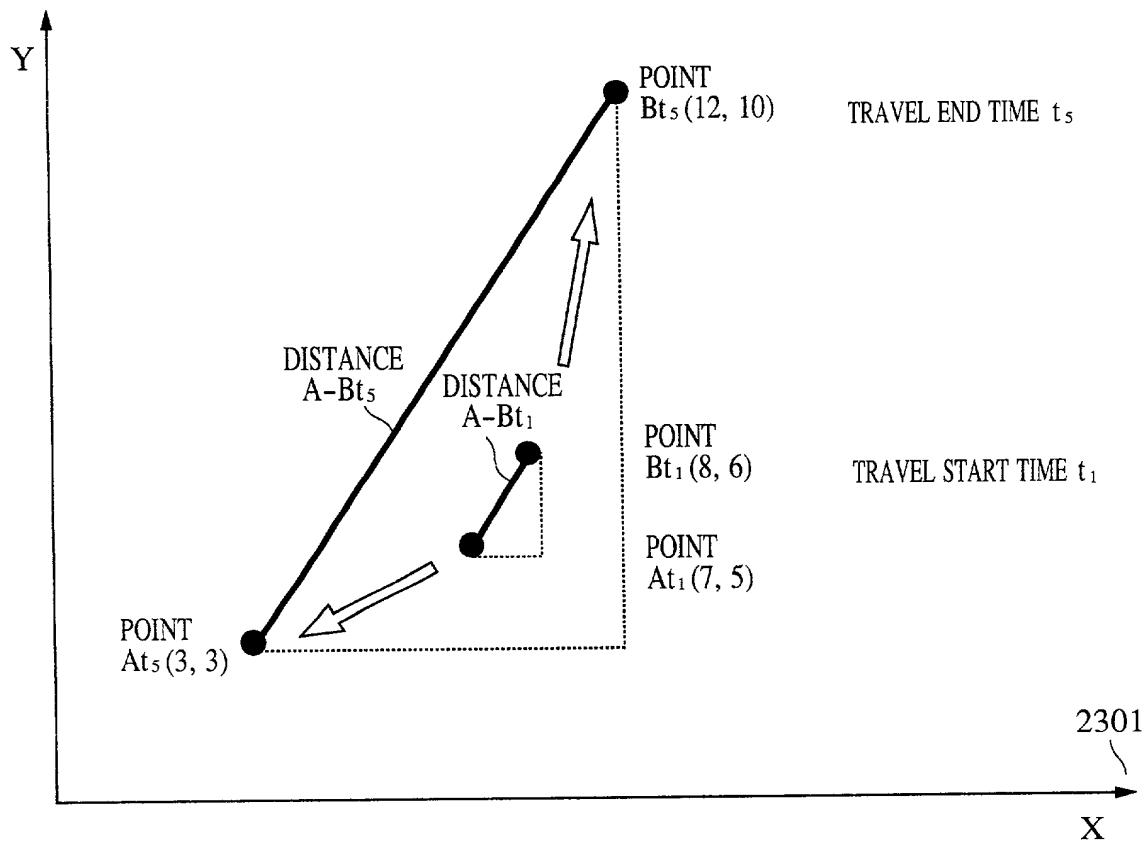


FIG. 23A

DISTANCE BETWEEN DESIGNATED POSITIONS A AND B,  
AND AMOUNT OF CHANGE

	DISTANCE BETWEEN A AND B	MAGNIFICATION (DISTANCE $t_n$ /DISTANCE $t_1$ )
$t_1$	1.118	100%
$t_2$	4.081	365%
$t_3$	7.080	633%
$t_4$	9.552	854%
$t_5$	11.402	1020%

2302

FIG. 23B

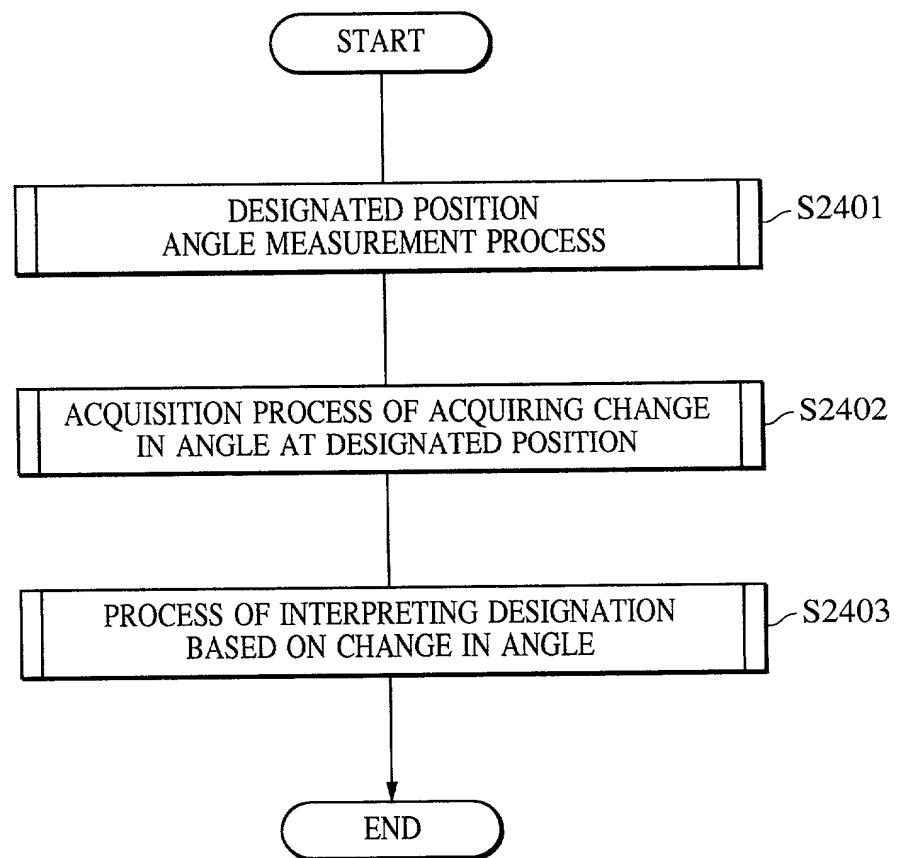


FIG. 24

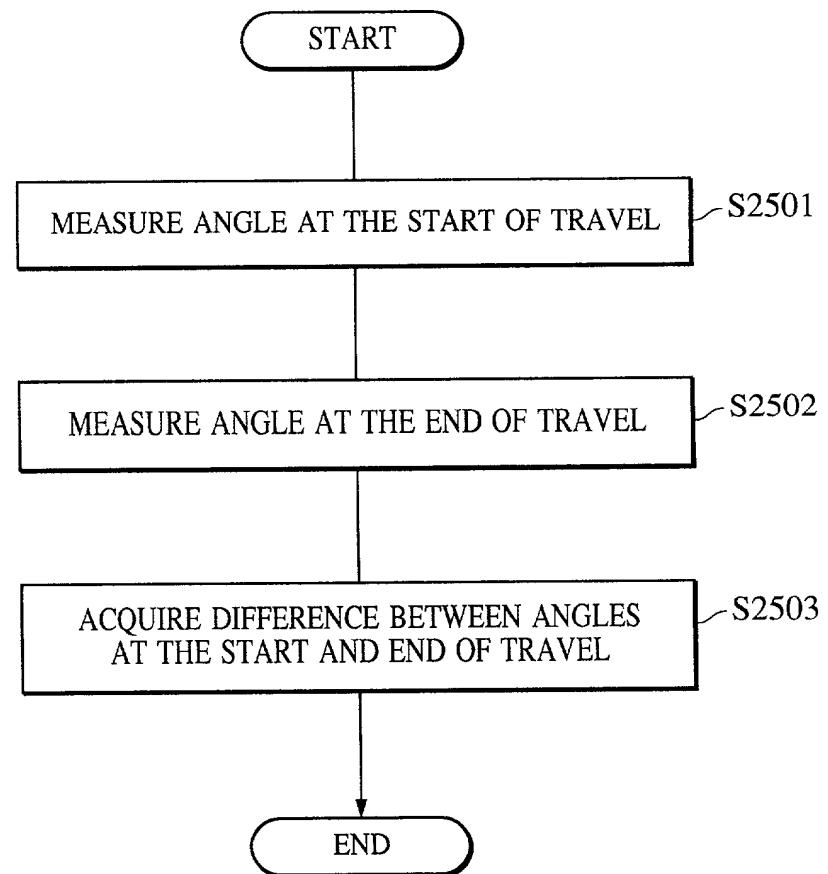


FIG. 25

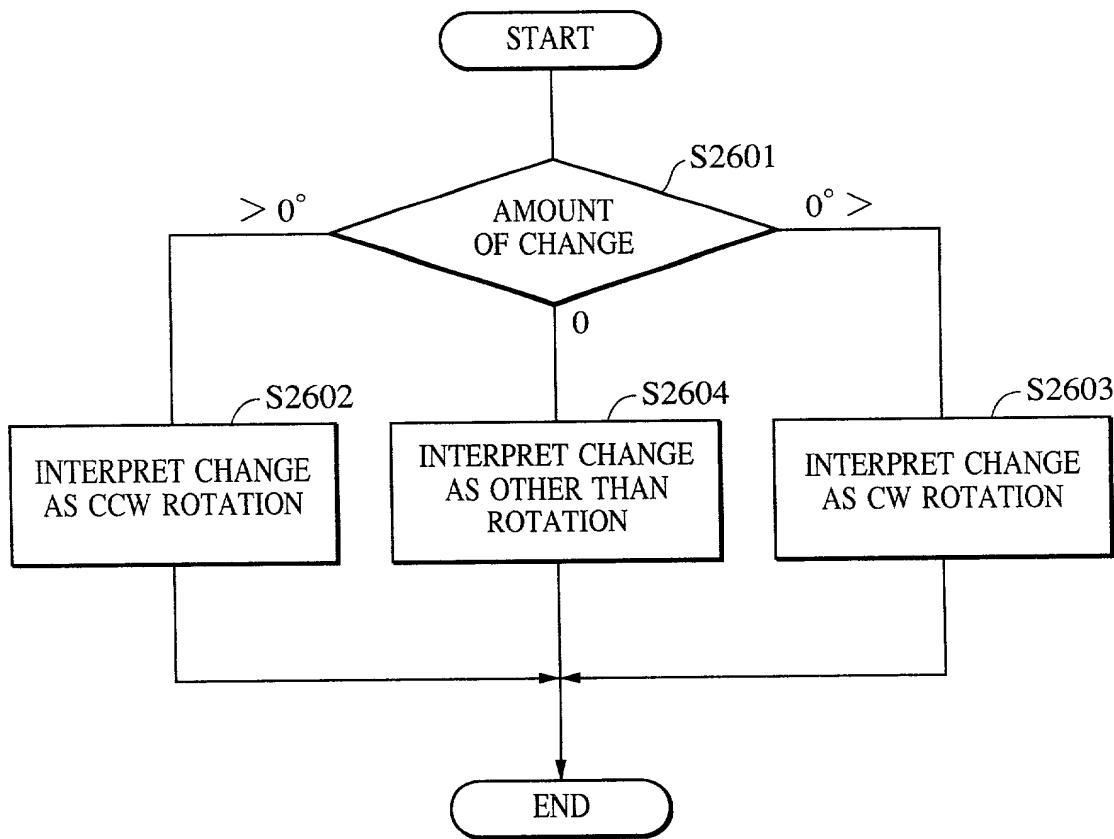


FIG. 26

CW ROTATION

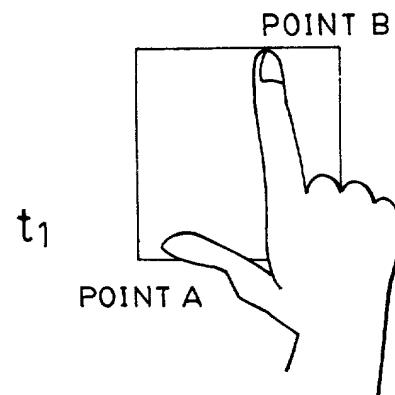


FIG. 27A

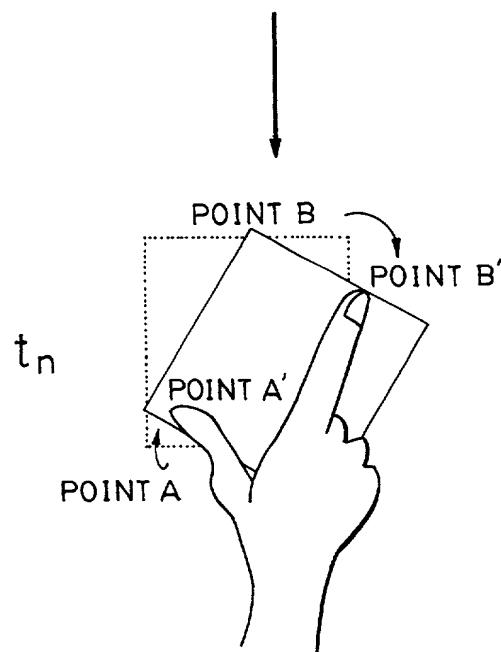


FIG. 27B

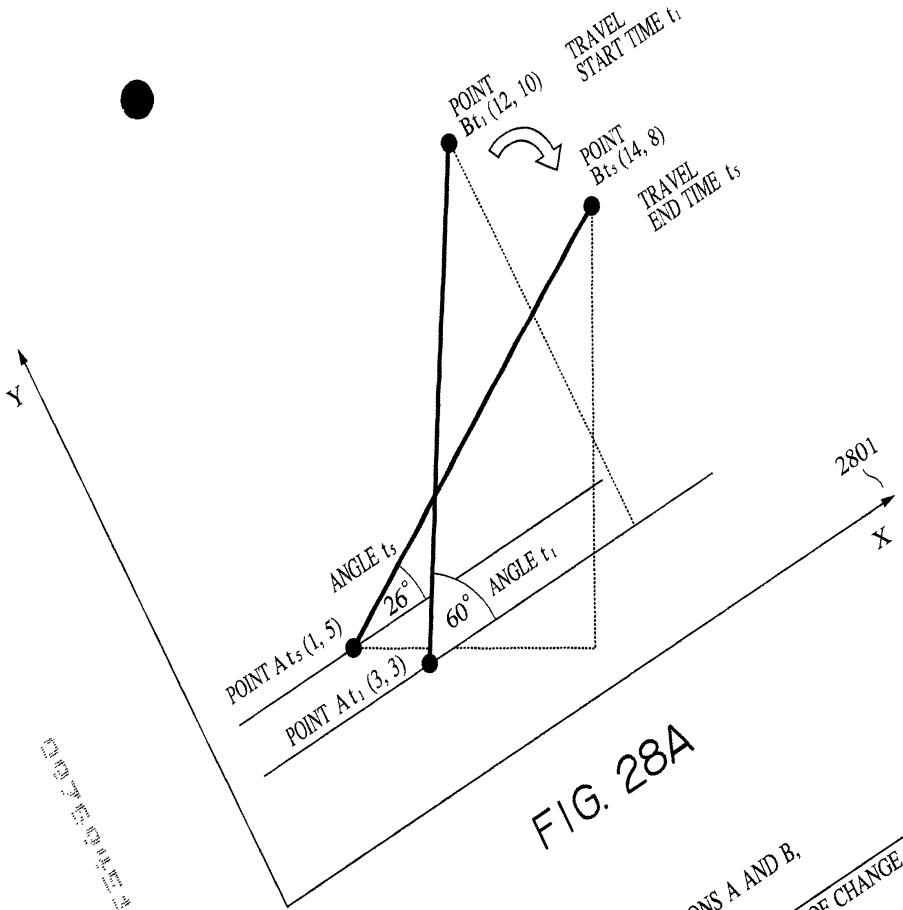


FIG. 28A

ANGLE OF DESIGNATED POSITIONS A AND B, AND AMOUNT OF CHANGE		AMOUNT OF CHANGE (t <sub>n</sub> - t <sub>1</sub> )
	ANGLE OF LINE AB	
t <sub>1</sub>	60	0
t <sub>2</sub>	49	-11
t <sub>3</sub>	40	-20
t <sub>4</sub>	33	-27
t <sub>5</sub>	26	-34

FIG. 28B

2802

CCW ROTATION

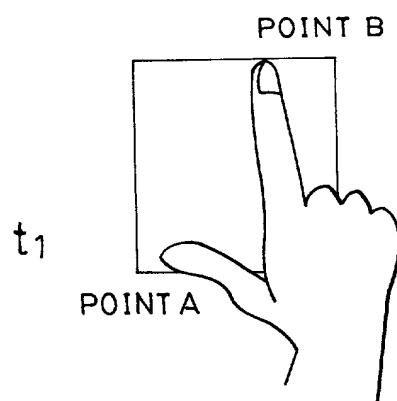


FIG. 29A

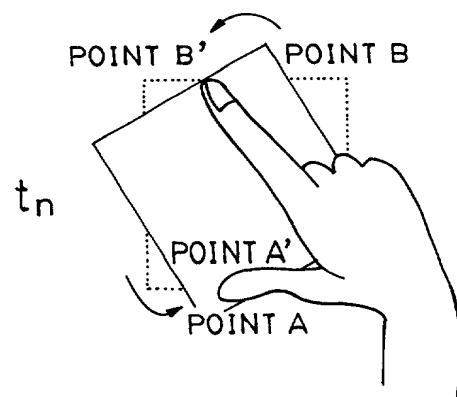


FIG. 29B

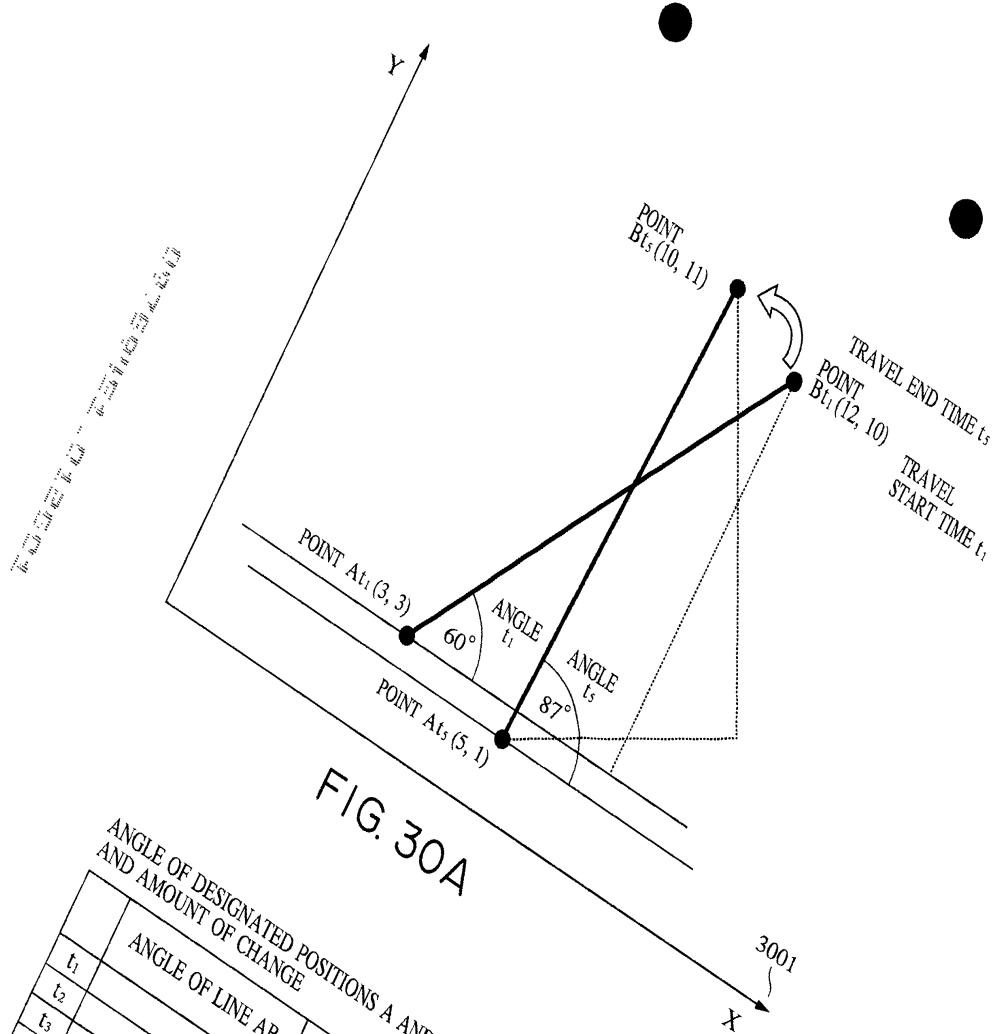


FIG. 30A

ANGLE OF DESIGNATED POSITIONS A AND B,  
AND AMOUNT OF CHANGE

	ANGLE OF LINE AB	AMOUNT OF CHANGE ( $t_n - t_1$ )
$t_1$		0
$t_2$	60	5
$t_3$	65	10
$t_4$	70	20
$t_5$	80	27
	87	

FIG. 30B

3002

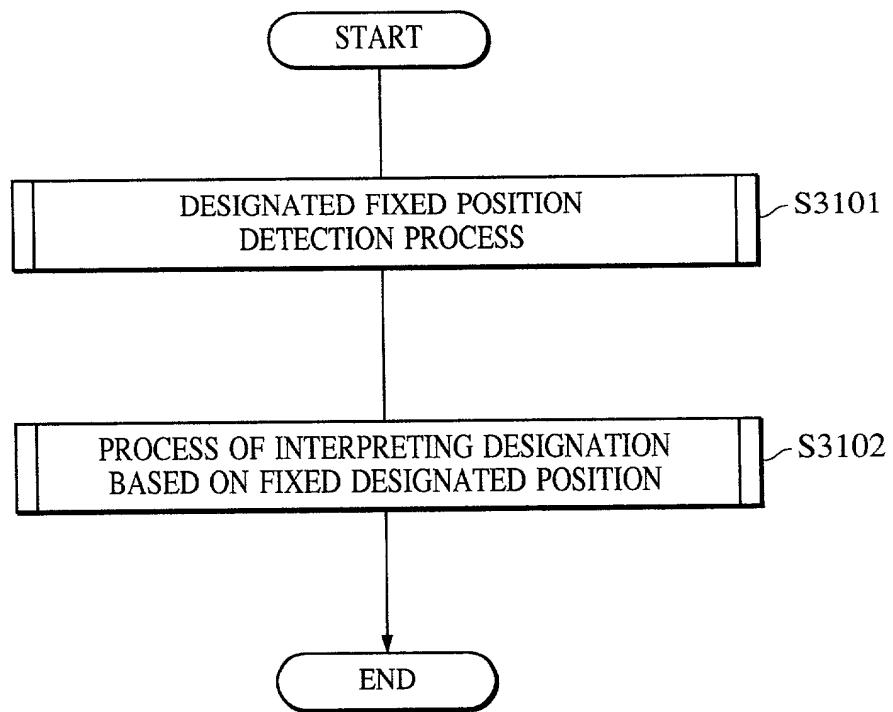


FIG. 31

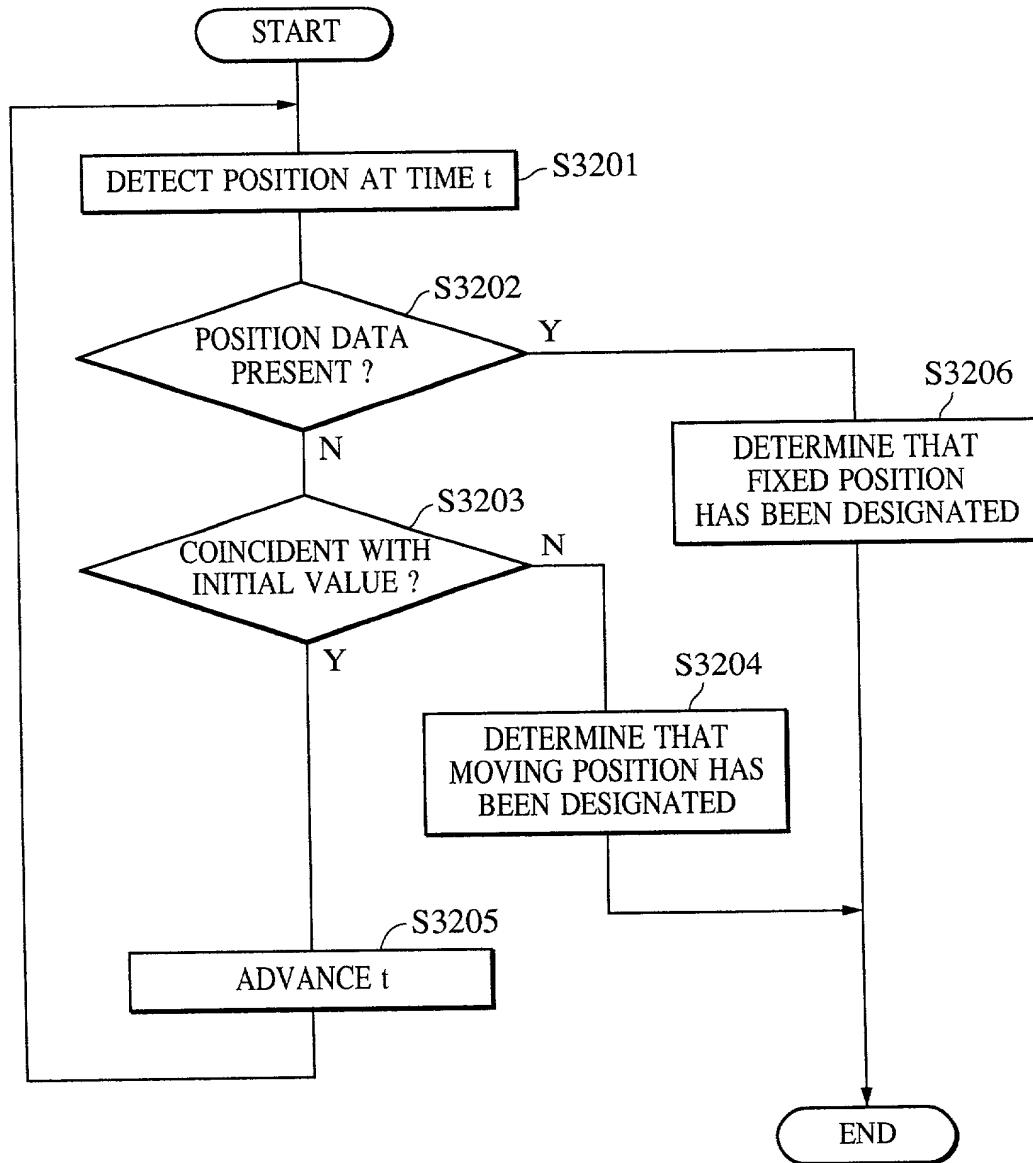


FIG. 32

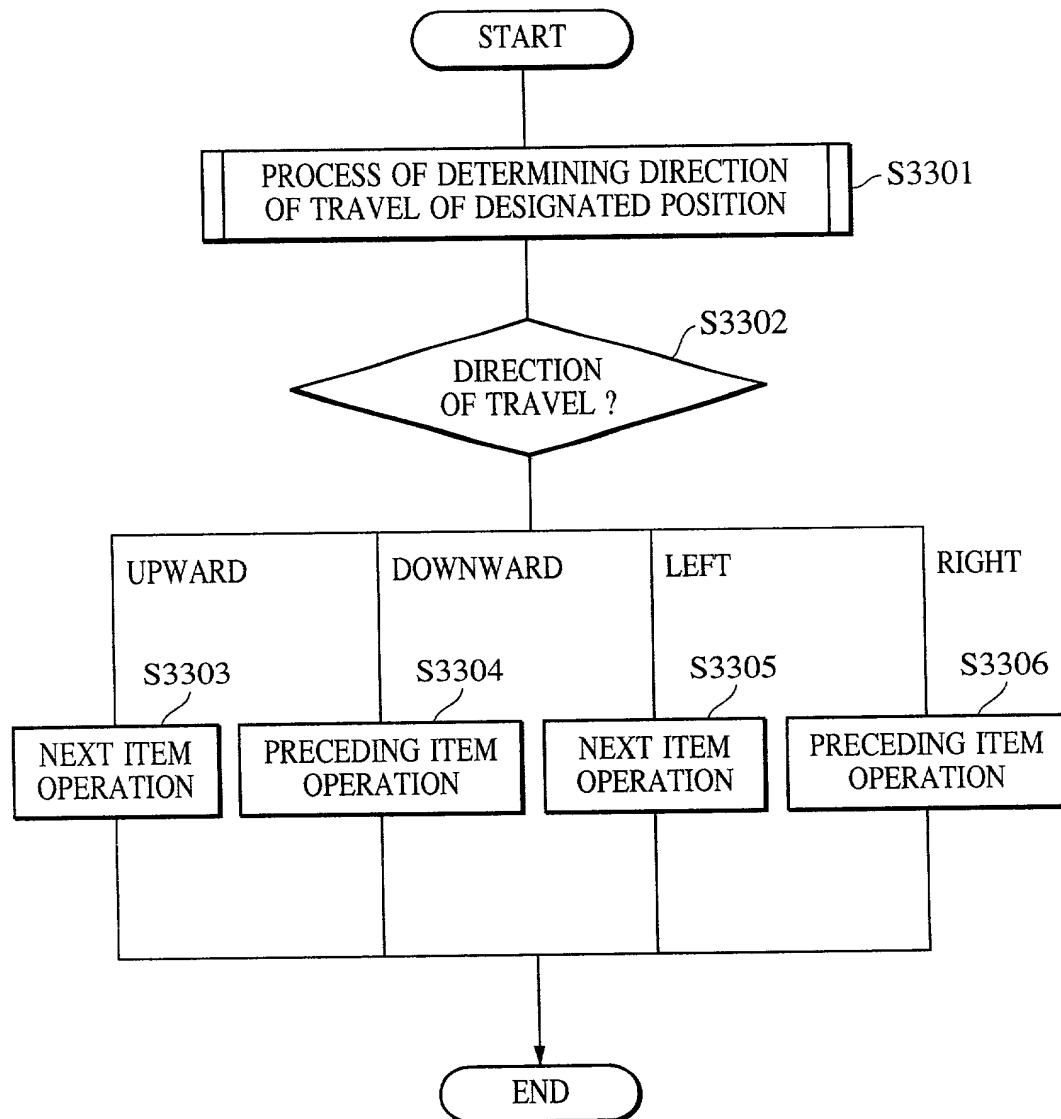


FIG. 33

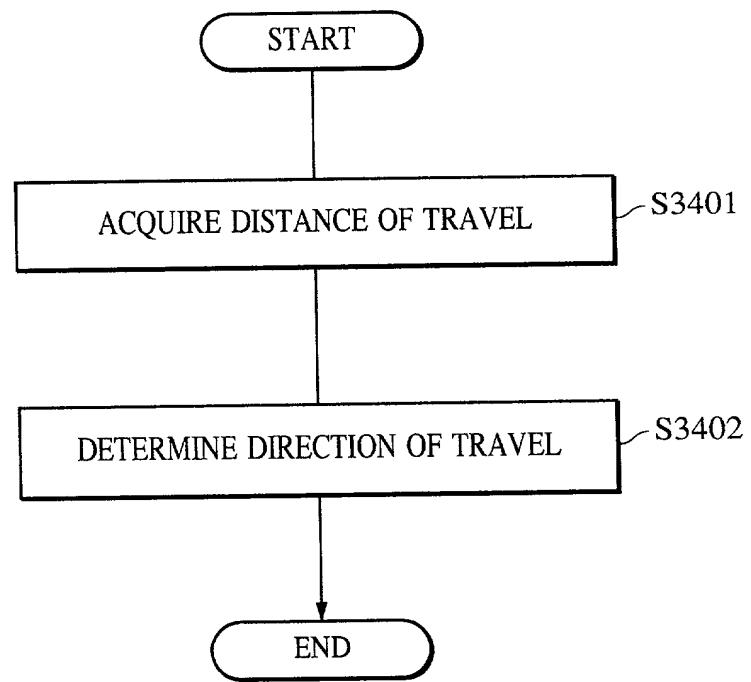


FIG. 34

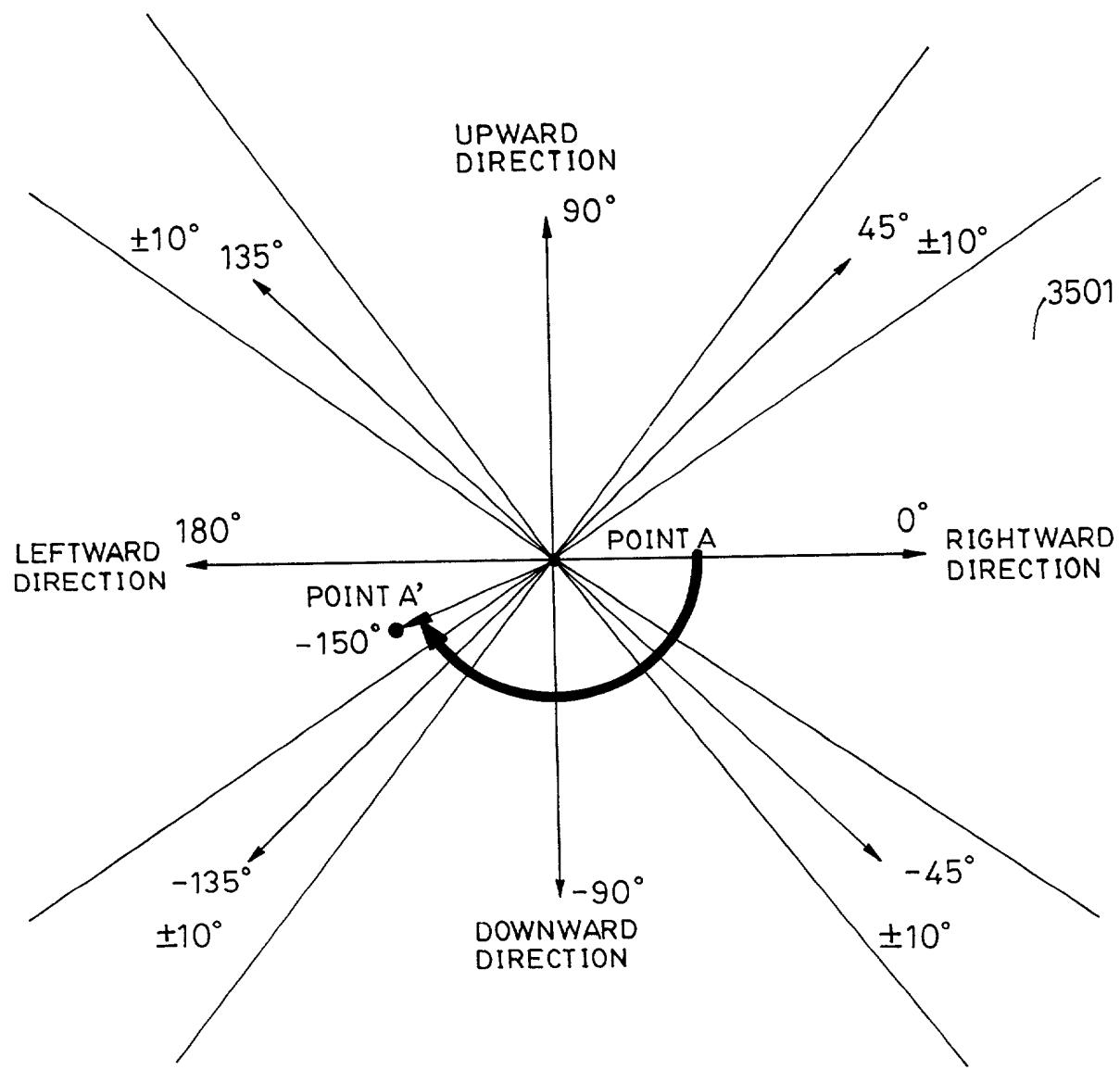


FIG. 35

LEFTWARD TRAVEL

DESIGNATED  
FIXED POSITION  
(POINT A)

DESIGNATED  
MOVING POSITION  
(POINT  $B_{t_1}$ )

FIG. 36A

DESIGNATED  
MOVING POSITION  
(POINT  $B_{t_5}$ )

DESIGNATED  
FIXED POSITION  
(POINT A)

LEFTWARD DIRECTION OF TRAVEL

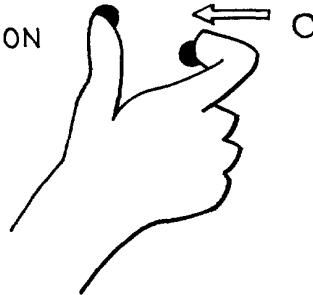


FIG. 36B

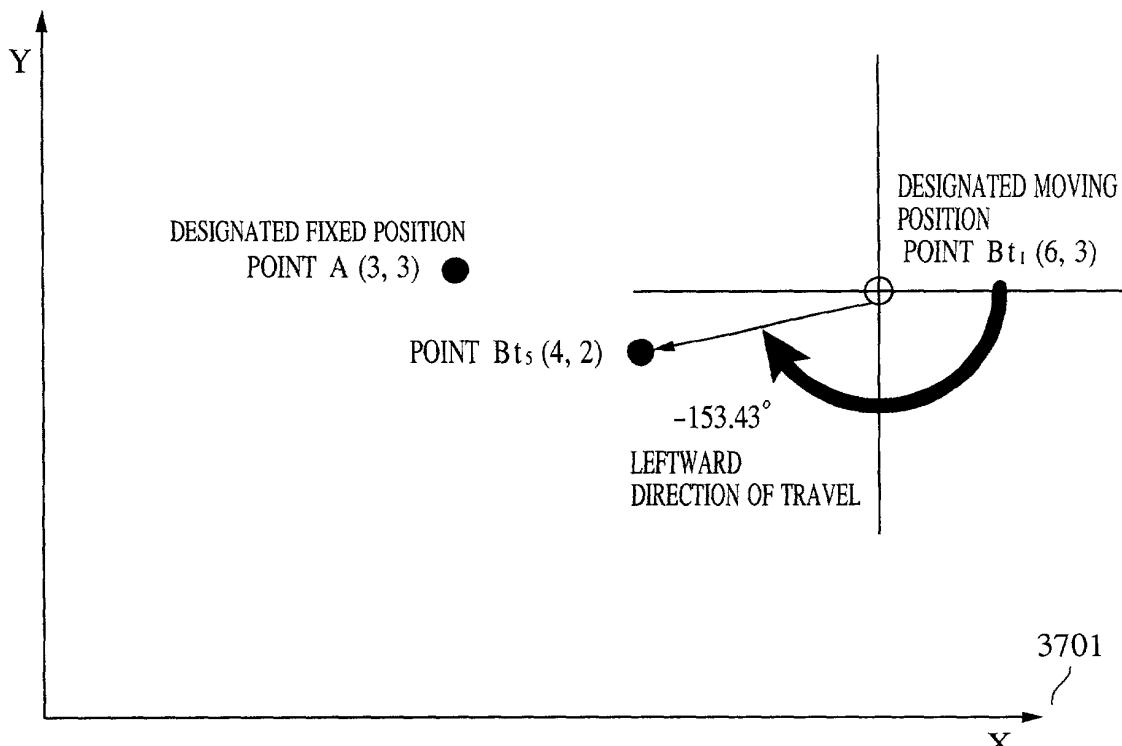


FIG. 37A

DESIGNATED FIXED POSITION  
POSITION DATA OF POINT A

	A <sub>X</sub>	A <sub>Y</sub>
t <sub>1</sub>	3	3
t <sub>2</sub>	3	3
t <sub>3</sub>	3	3
t <sub>4</sub>	3	3
t <sub>5</sub>	3	3

FIG. 37B

DESIGNATED MOVING POSITION  
POSITION DATA OF POINT B

	B <sub>X</sub>	B <sub>Y</sub>
t <sub>1</sub>	6.0	3.0
t <sub>2</sub>	5.3	2.3
t <sub>3</sub>	4.7	1.7
t <sub>4</sub>	4.3	1.2
t <sub>5</sub>	4.0	2.0

FIG. 37C

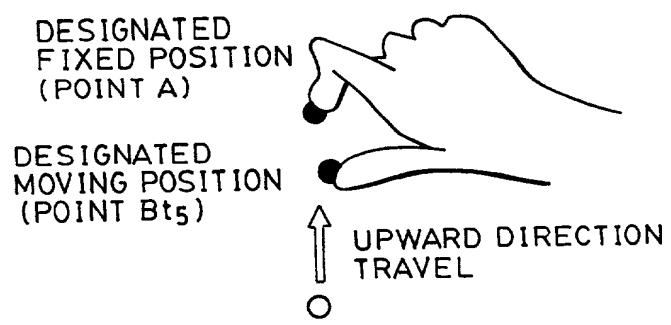
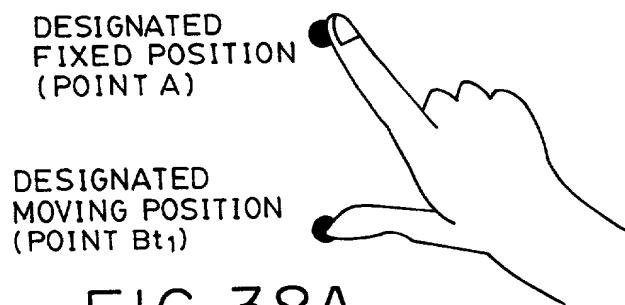
DESIGNATED POSITION TRAVEL DATA

	TRAVEL OF POINT A	TRAVEL OF POINT B	DIRECTION OF TRAVEL (DEGREES)
t <sub>1</sub>	0.000	0.000	-153.43
t <sub>2</sub>	0.000	0.000	-153.43
t <sub>3</sub>	0.000	1.862	-153.43
t <sub>4</sub>	0.000	2.453	-153.43
t <sub>5</sub>	0.000	2.236	153.43

3703

FIG. 37D

UPWARD TRAVEL



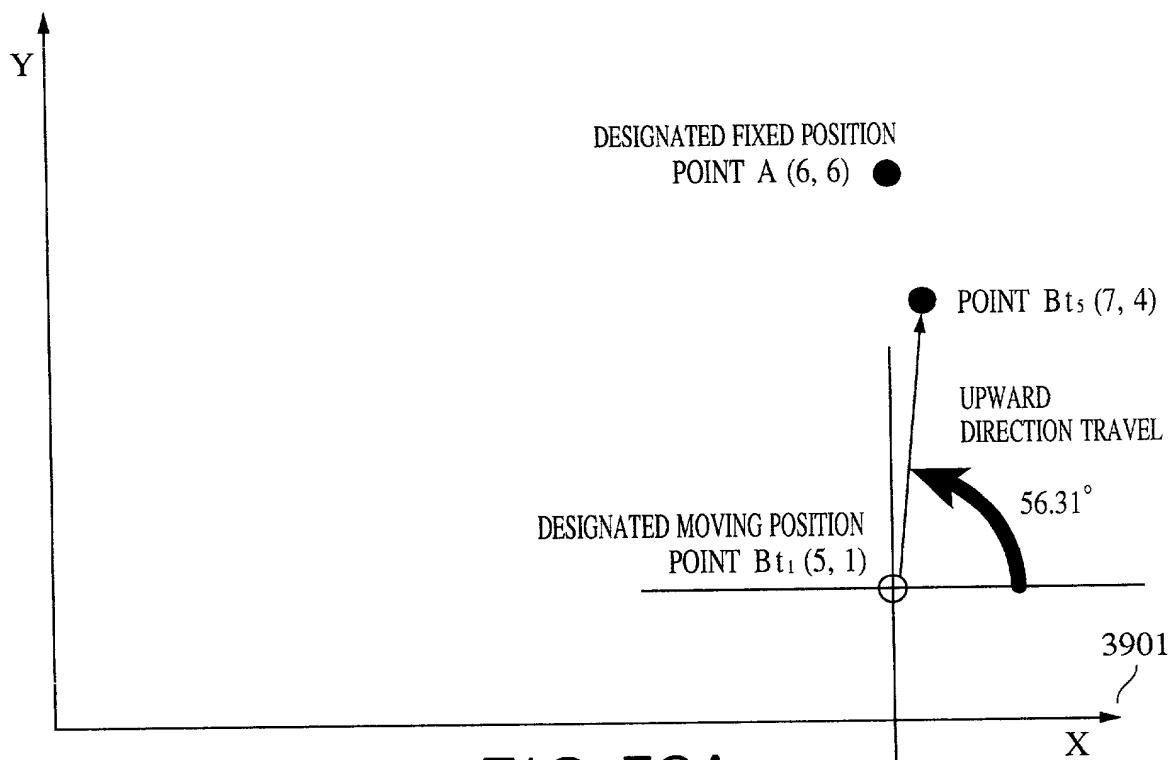


FIG. 39A

DESIGNATED FIXED POSITION  
POSITION DATA OF POINT A

	A <sub>x</sub>	A <sub>y</sub>
t <sub>1</sub>	6	6
t <sub>2</sub>	6	6
t <sub>3</sub>	6	6
t <sub>4</sub>	6	6
t <sub>5</sub>	6	6

FIG. 39B

DESIGNATED MOVING POSITION  
POSITION DATA OF POINT B

	B <sub>x</sub>	B <sub>y</sub>
t <sub>1</sub>	5.0	1.0
t <sub>2</sub>	5.6	1.8
t <sub>3</sub>	6.0	2.3
t <sub>4</sub>	6.6	3.5
t <sub>5</sub>	7.0	4.0

FIG. 39C

DESIGNATED POSITION TRAVEL DATA

	TRAVEL OF POINT A	TRAVEL OF POINT B	DIRECTION OF TRAVEL
t <sub>1</sub>	0.000	0.000	0.00
t <sub>2</sub>	0.000	1.000	53.13
t <sub>3</sub>	0.000	1.640	52.43
t <sub>4</sub>	0.000	2.968	57.38
t <sub>5</sub>	0.000	3.606	56.31

3903

FIG. 39D

DOWNWARD TRAVEL

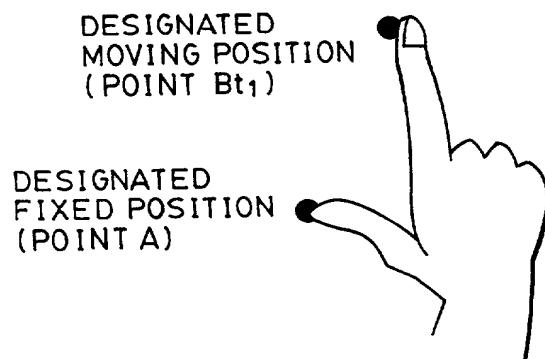


FIG. 40A

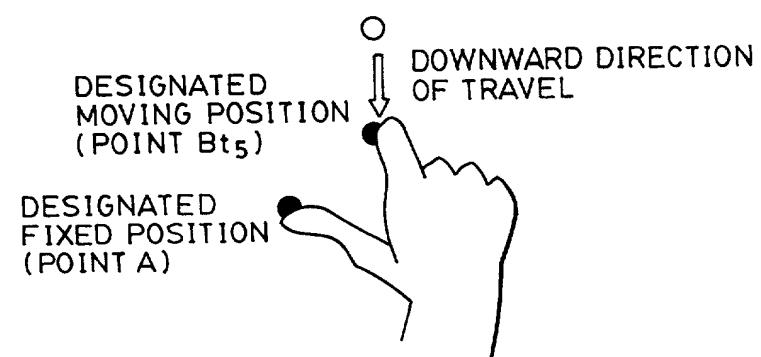


FIG. 40B

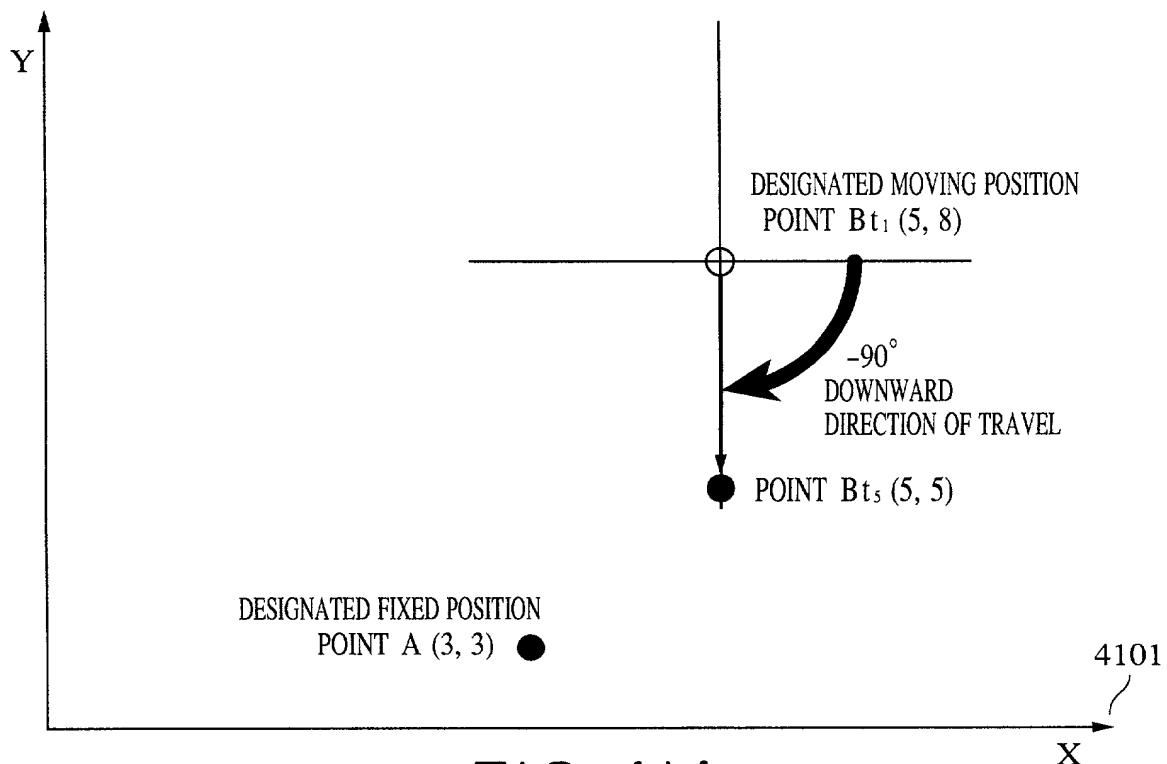


FIG. 4IA

DESIGNATED FIXED POSITION  
POSITION DATA OF POINT A

	A <sub>X</sub>	A <sub>Y</sub>
t <sub>1</sub>	3	3
t <sub>2</sub>	3	3
t <sub>3</sub>	3	3
t <sub>4</sub>	3	3
t <sub>5</sub>	3	3

DESIGNATED MOVING POSITION  
POSITION DATA OF POINT B

	B <sub>X</sub>	B <sub>Y</sub>
t <sub>1</sub>	5.0	8.0
t <sub>2</sub>	5.0	7.2
t <sub>3</sub>	5.0	6.5
t <sub>4</sub>	5.0	5.6
t <sub>5</sub>	5.0	5.0

FIG. 4IB

FIG. 4IC

DESIGNATED POSITION TRAVEL DATA

	TRAVEL OF POINT A	TRAVEL OF POINT B	DIRECTION OF TRAVEL
t <sub>1</sub>	0.000	0.000	0.00
t <sub>2</sub>	0.000	0.800	-90.00
t <sub>3</sub>	0.000	1.500	-90.00
t <sub>4</sub>	0.000	2.400	-90.00
t <sub>5</sub>	0.000	3.000	-90.00

FIG. 4ID

RIGHTWARD TRAVEL

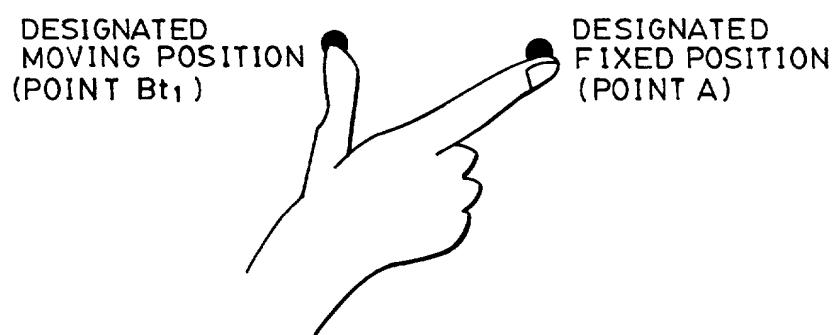


FIG. 42A

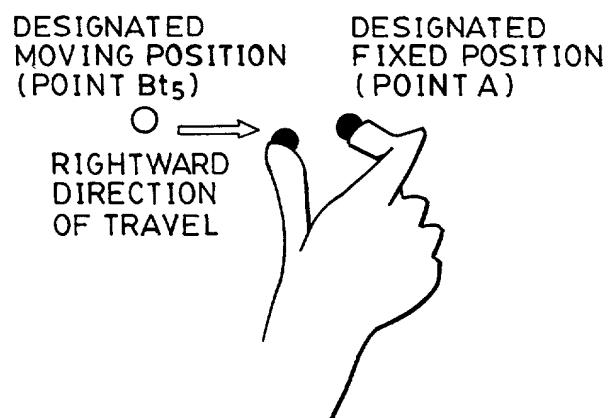


FIG. 42B

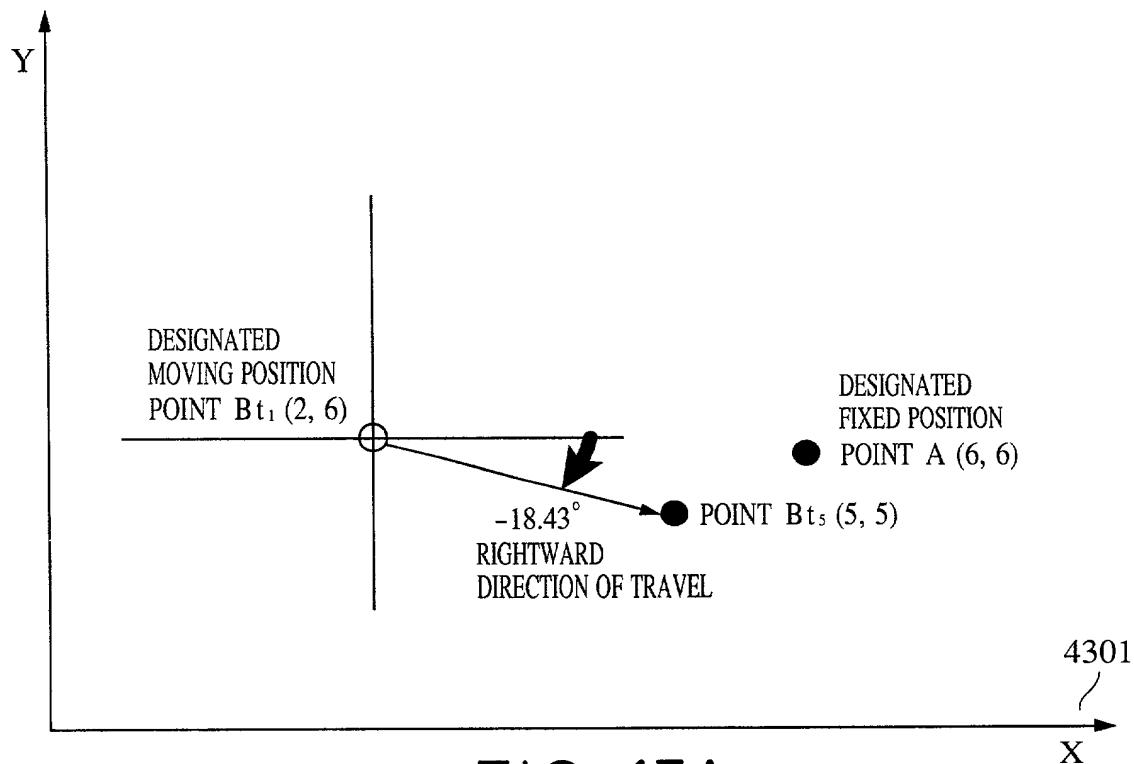


FIG. 43A

DESIGNATED FIXED POSITION  
POSITION DATA OF POINT A

	A <sub>x</sub>	A <sub>y</sub>
t <sub>1</sub>	6	6
t <sub>2</sub>	6	6
t <sub>3</sub>	6	6
t <sub>4</sub>	6	6
t <sub>5</sub>	6	6

DESIGNATED MOVING POSITION  
POSITION DATA OF POINT B

	B <sub>x</sub>	B <sub>y</sub>
t <sub>1</sub>	2.0	6.0
t <sub>2</sub>	2.8	5.7
t <sub>3</sub>	3.5	5.6
t <sub>4</sub>	4.2	5.2
t <sub>5</sub>	5.0	5.0

FIG. 43B

FIG. 43C

DESIGNATED POSITION TRAVEL DATA

	TRAVEL OF POINT A	TRAVEL OF POINT B	DIRECTION OF TRAVEL
t <sub>1</sub>	0.000	0.000	0.00
t <sub>2</sub>	0.000	4.892	-40.86
t <sub>3</sub>	0.000	4.383	-34.78
t <sub>4</sub>	0.000	3.672	-29.36
t <sub>5</sub>	0.000	3.162	-18.43

4303

FIG. 43D

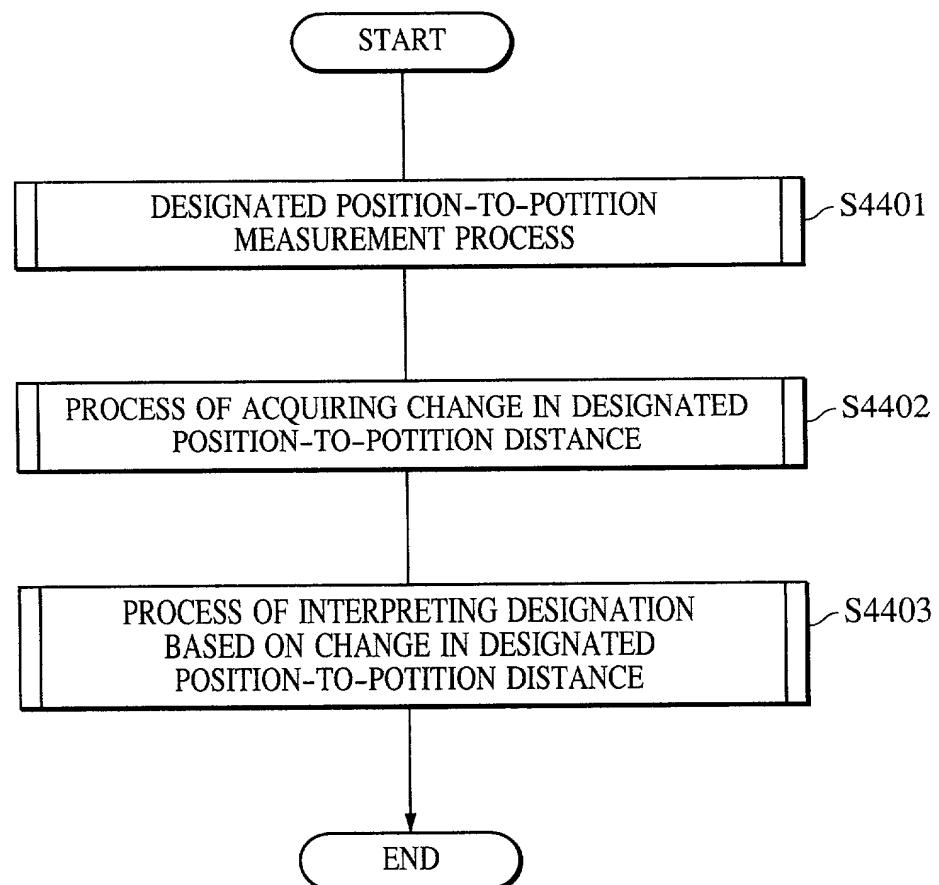


FIG. 44

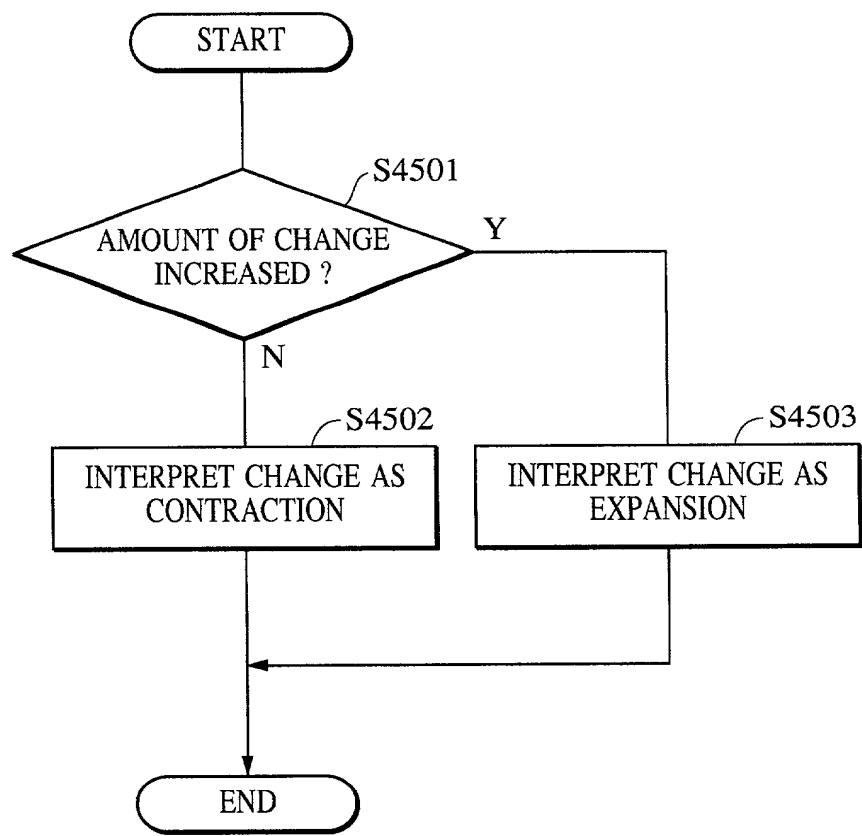


FIG. 45

CONTRACTION OPERATION

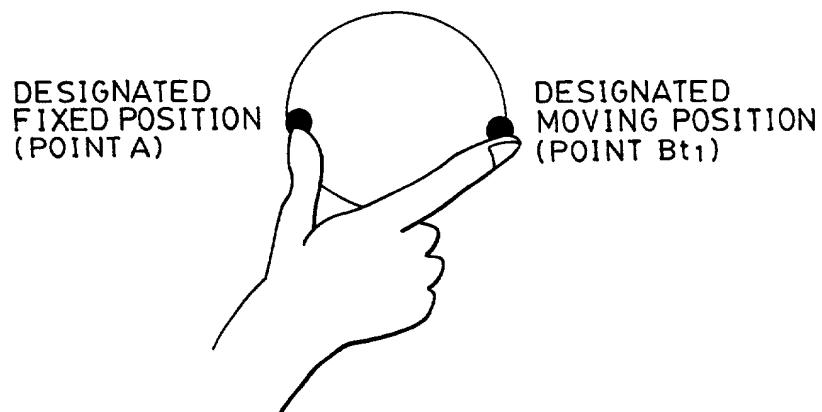


FIG. 46A

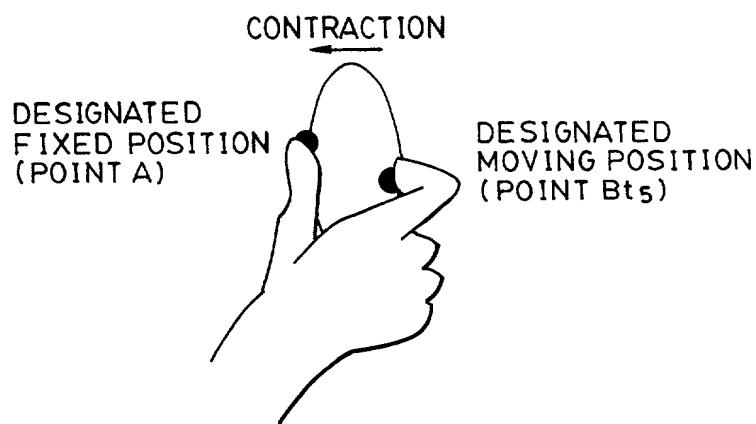


FIG. 46B

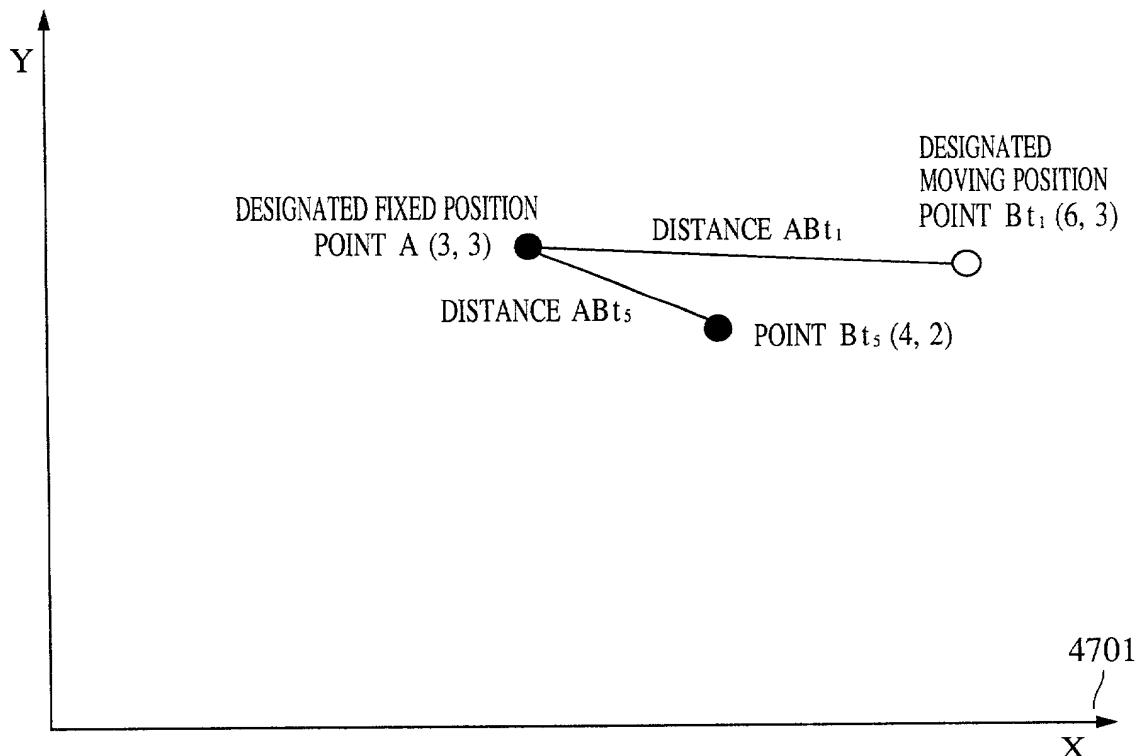


FIG. 47A

DESIGNATED FIXED POSITION  
POSITION DATA OF POINT A

	A <sub>X</sub>	A <sub>Y</sub>
t <sub>1</sub>	3	3
t <sub>2</sub>	3	3
t <sub>3</sub>	3	3
t <sub>4</sub>	3	3
t <sub>5</sub>	3	3

FIG. 47B

DESIGNATED MOVING POSITION  
POSITION DATA OF POINT B

	B <sub>X</sub>	B <sub>Y</sub>
t <sub>1</sub>	6.0	3.0
t <sub>2</sub>	5.3	2.3
t <sub>3</sub>	4.7	1.7
t <sub>4</sub>	4.3	1.2
t <sub>5</sub>	4.0	2.0

FIG. 47C

DATA OF CHANGE IN DESIGNATED POSITION-TO-POSITION DISTANCE

4703

	DISTANCE BETWEEN A AND B	MAGNIFICATION (DISTANCE t <sub>n</sub> / DISTANCE t <sub>1</sub> )	DISTANCE t <sub>n</sub> / DISTANCE t <sub>1</sub>
t <sub>1</sub>	3.000	100%	0.000
t <sub>2</sub>	2.436	81%	-0.564
t <sub>3</sub>	2.114	70%	-0.886
t <sub>4</sub>	2.240	75%	-0.760
t <sub>5</sub>	1.414	47%	-1.586

FIG. 47D

EXPANSION OPERATION

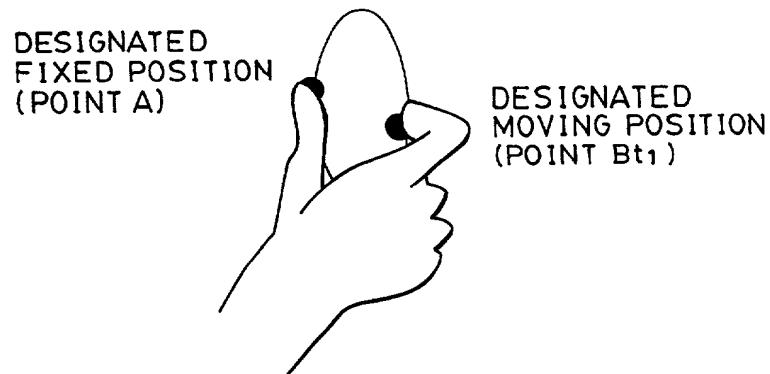


FIG. 48A



EXPANDED

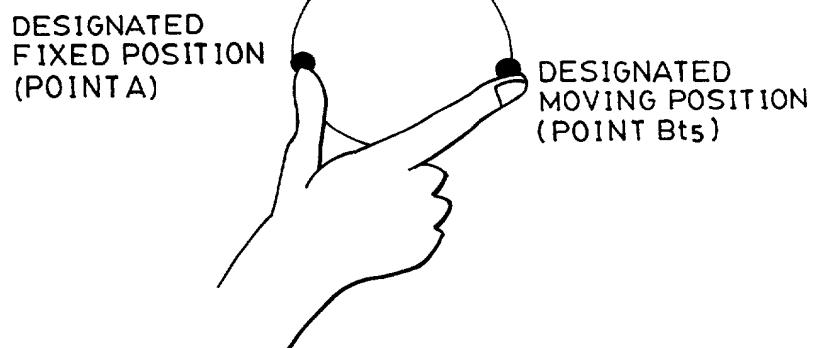


FIG. 48B

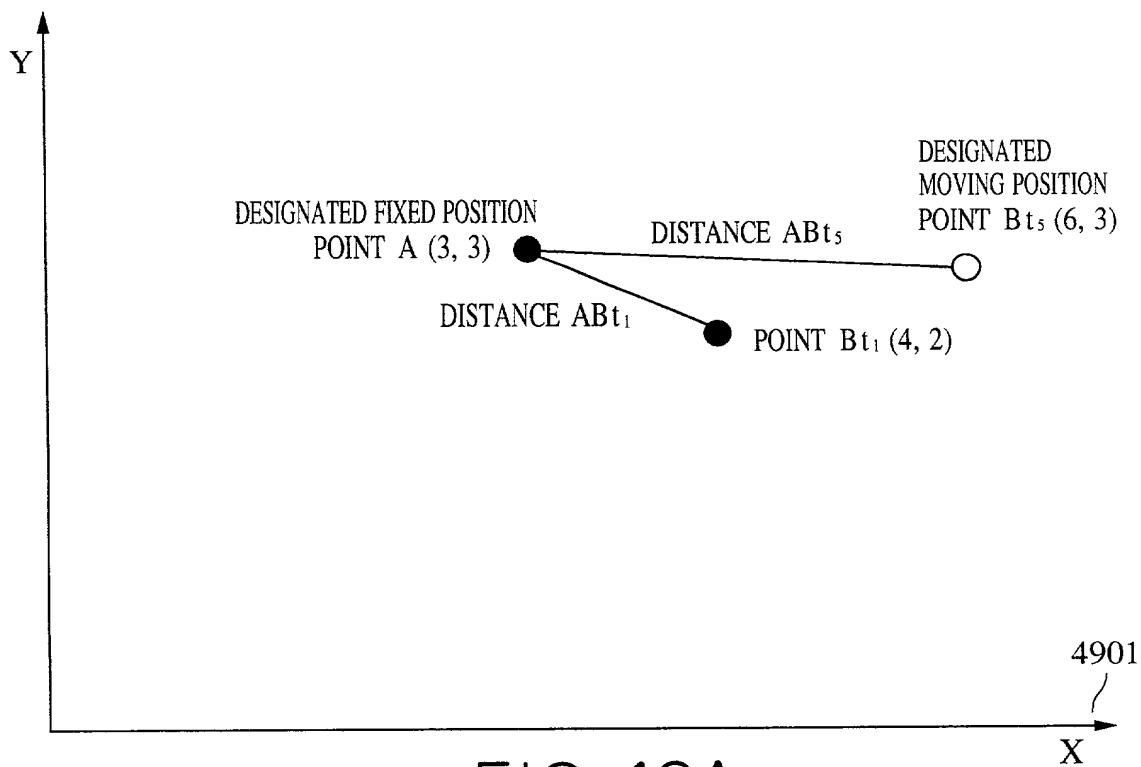


FIG. 49A

DESIGNATED FIXED POSITION  
POSITION DATA OF POINT A

	A <sub>X</sub>	A <sub>Y</sub>
t <sub>1</sub>	3	3
t <sub>2</sub>	3	3
t <sub>3</sub>	3	3
t <sub>4</sub>	3	3
t <sub>5</sub>	3	3

FIG. 49B

DESIGNATED MOVING POSITION  
POSITION DATA OF POINT B

	B <sub>X</sub>	B <sub>Y</sub>
t <sub>1</sub>	4.0	2.0
t <sub>2</sub>	4.5	2.2
t <sub>3</sub>	5.2	2.5
t <sub>4</sub>	5.8	2.8
t <sub>5</sub>	6.0	3.0

FIG. 49C

DATA OF CHANGE IN DESIGNATED POSITION-TO-POSITION DISTANCE

	DISTANCE BETWEEN A AND B	MAGNIFICATION (DISTANCE t <sub>n</sub> / DISTANCE t <sub>1</sub> )
t <sub>1</sub>	1.414	100%
t <sub>2</sub>	1.700	120%
t <sub>3</sub>	2.256	160%
t <sub>4</sub>	2.807	198%
t <sub>5</sub>	3.000	212%

4903

FIG. 49D

CONTRACTION OPERATION

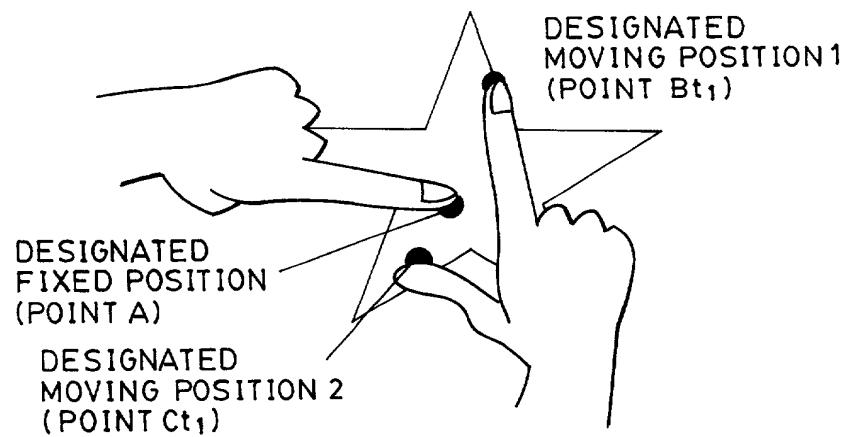


FIG. 50A

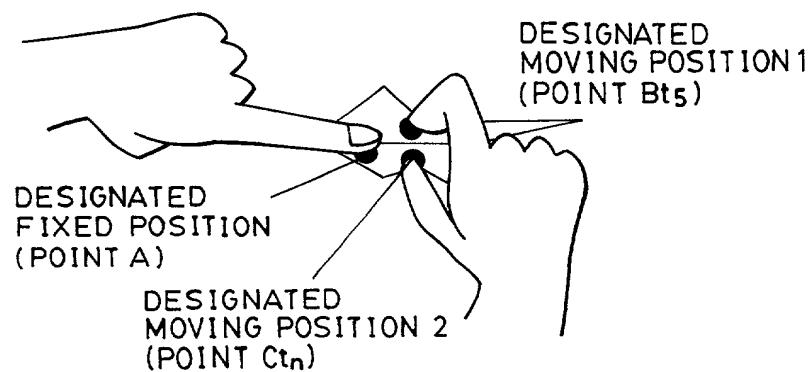


FIG. 50B

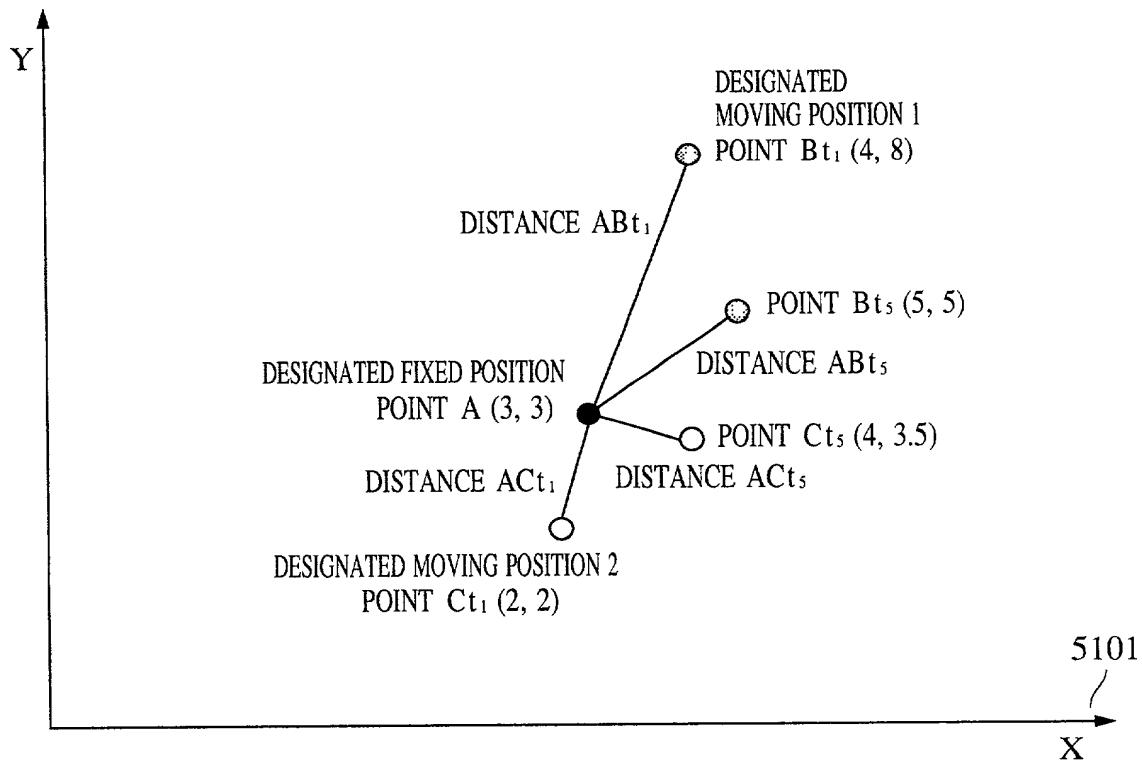


FIG. 51A

DESIGNATED FIXED POSITION  
POSITION DATA OF POINT A

	A <sub>x</sub>	A <sub>y</sub>
t <sub>1</sub>	3	3
t <sub>2</sub>	3	3
t <sub>3</sub>	3	3
t <sub>4</sub>	3	3
t <sub>5</sub>	3	3

DESIGNATED MOVING POSITION 1  
POSITION DATA OF POINT B

	B <sub>x</sub>	B <sub>y</sub>
t <sub>1</sub>	4.0	8.0
t <sub>2</sub>	4.2	7.2
t <sub>3</sub>	4.4	6.3
t <sub>4</sub>	4.7	5.8
t <sub>5</sub>	5.0	5.0

DESIGNATED MOVING POSITION 2  
POSITION DATA OF POINT C

	C <sub>x</sub>	C <sub>y</sub>
t <sub>1</sub>	2.0	2.0
t <sub>2</sub>	2.8	2.3
t <sub>3</sub>	3.4	2.8
t <sub>4</sub>	3.8	3.3
t <sub>5</sub>	4.0	3.5

FIG. 51B

FIG. 51D

FIG. 51C

DATA 1 OF CHANGE IN DESIGNATED  
POSITION-TO-POSITION DISTANCE

	DISTANCE BETWEEN A AND B	MAGNIFICATION (DISTANCE t <sub>n</sub> / DISTANCE t <sub>1</sub> )
t <sub>1</sub>	5.099	100%
t <sub>2</sub>	4.368	86%
t <sub>3</sub>	3.585	70%
t <sub>4</sub>	3.276	64%
t <sub>5</sub>	2.828	55%

DATA 2 OF CHANGE IN DESIGNATED  
POSITION-TO-POSITION DISTANCE

	DISTANCE BETWEEN A AND B	MAGNIFICATION (DISTANCE t <sub>n</sub> / DISTANCE t <sub>1</sub> )
t <sub>1</sub>		1.414
t <sub>2</sub>		0.728
t <sub>3</sub>		0.447
t <sub>4</sub>		0.854
t <sub>5</sub>		1.118

FIG. 51E

FIG. 51F

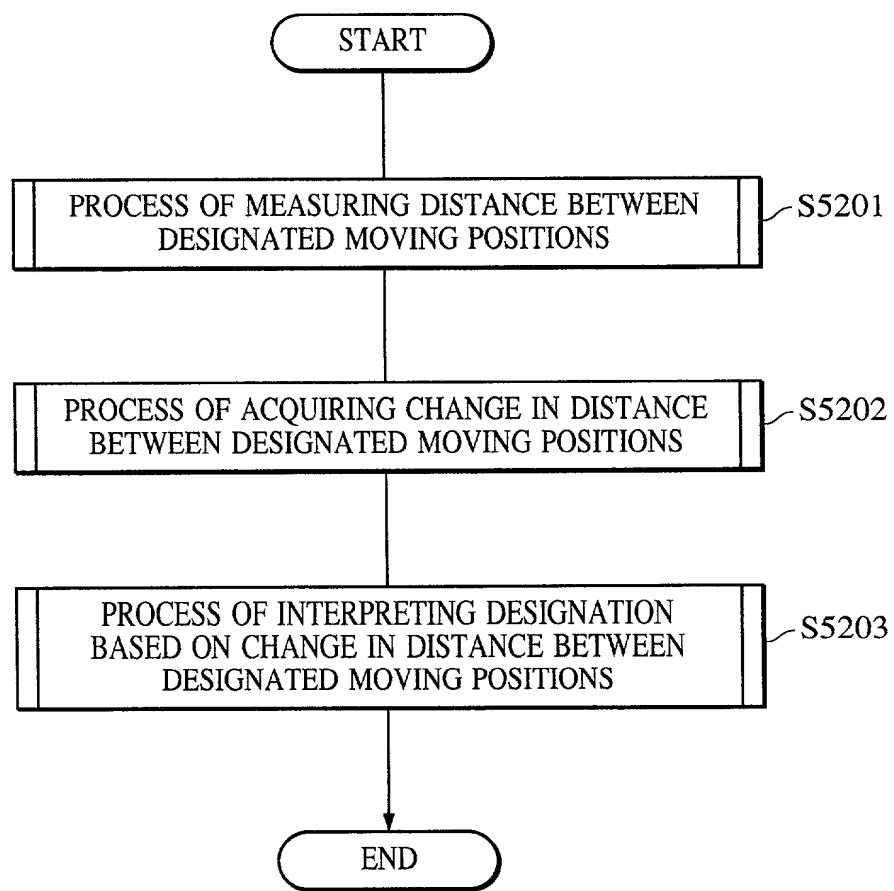


FIG. 52

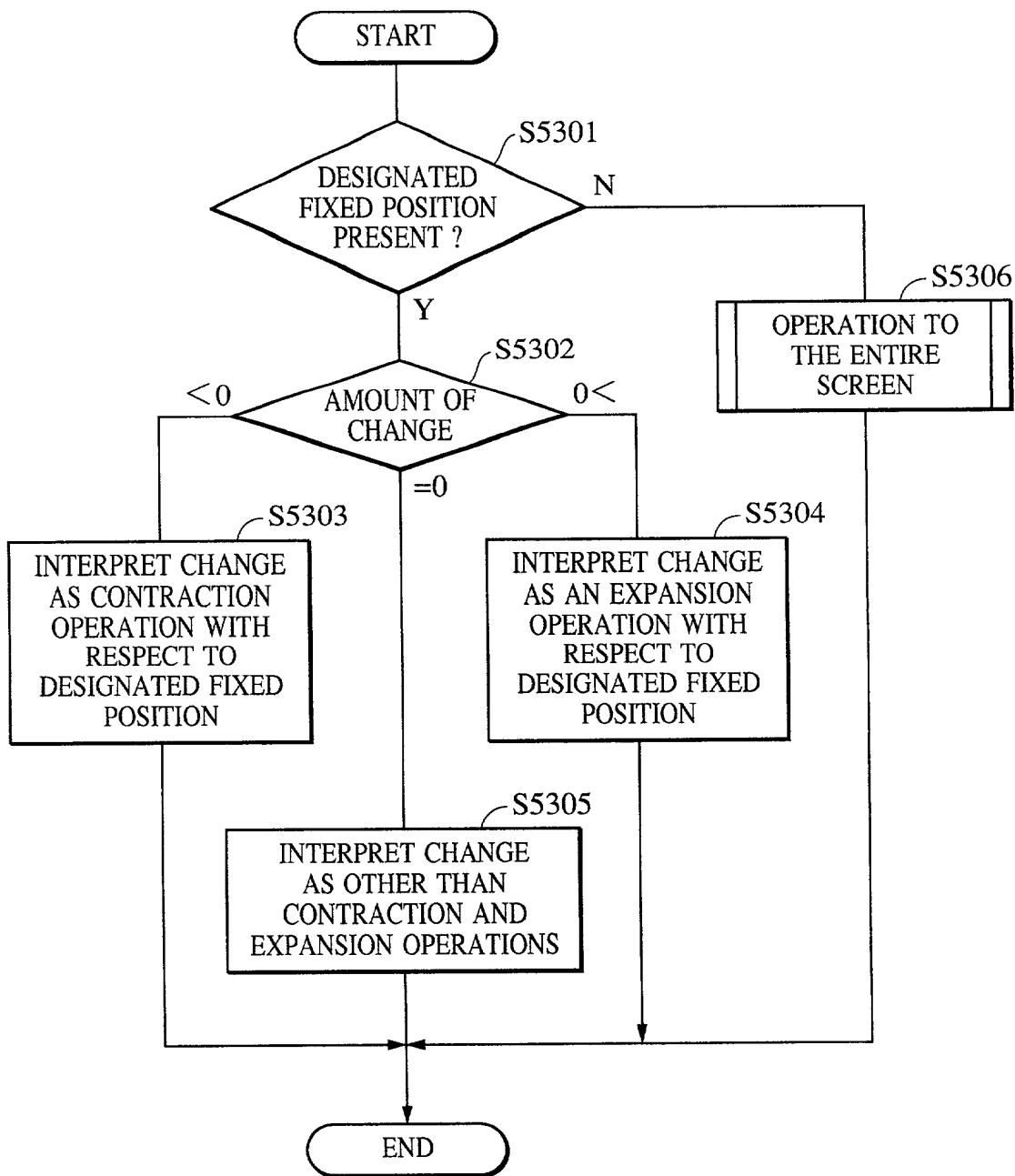


FIG. 53

CONTRACTION OPERATION

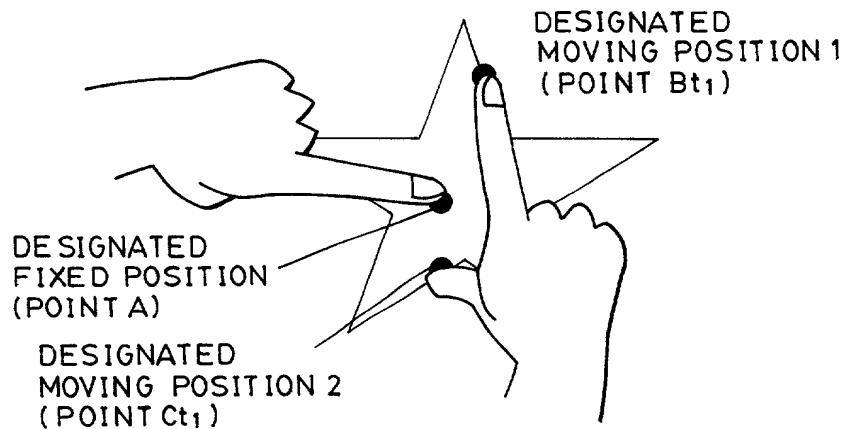


FIG. 54A

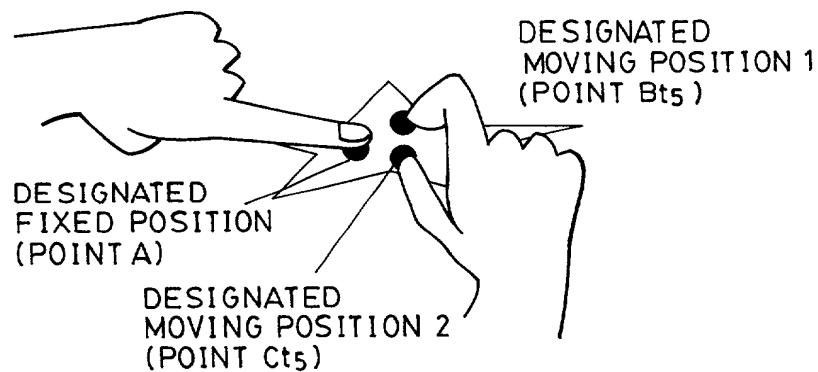


FIG. 54B

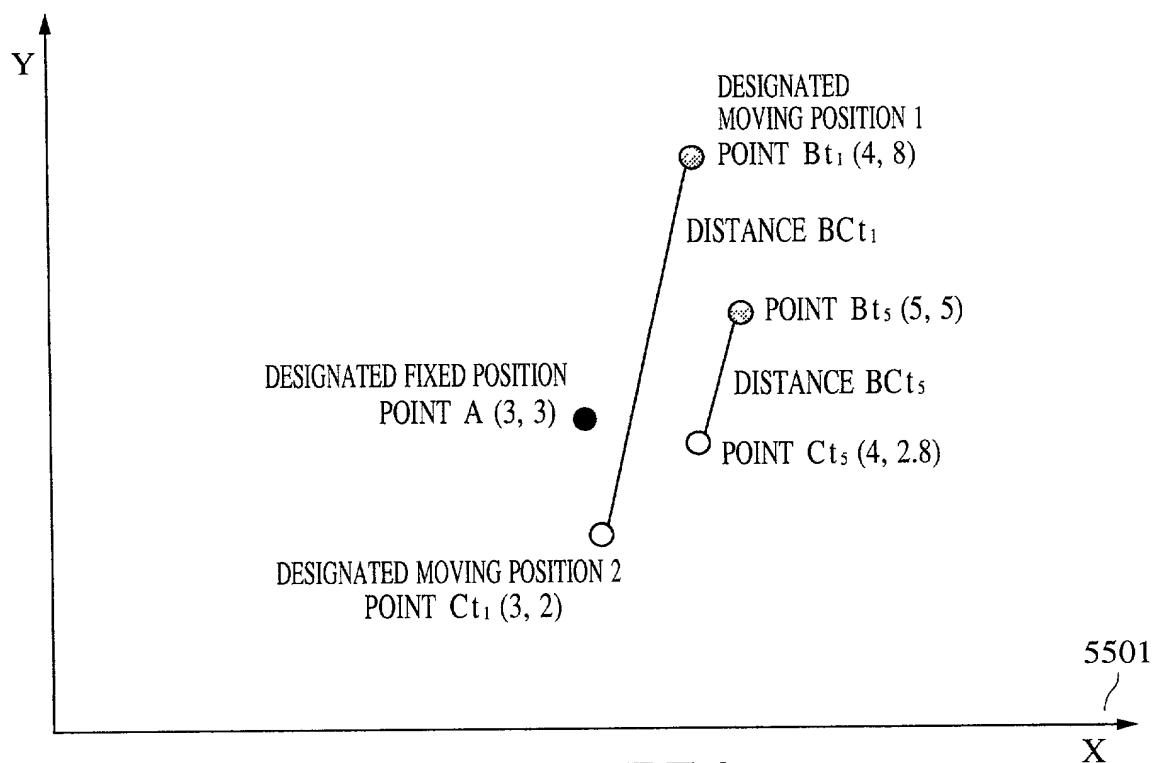


FIG. 55A

DESIGNATED FIXED POSITION  
POSITION DATA OF POINT A

	A <sub>x</sub>	A <sub>y</sub>
t <sub>1</sub>	3	3
t <sub>2</sub>	3	3
t <sub>3</sub>	3	3
t <sub>4</sub>	3	3
t <sub>5</sub>	3	3

DESIGNATED MOVING POSITION  
POSITION DATA OF POINT B

	B <sub>x</sub>	B <sub>y</sub>
t <sub>1</sub>	4.0	8.0
t <sub>2</sub>	4.2	7.2
t <sub>3</sub>	4.4	6.3
t <sub>4</sub>	4.7	5.8
t <sub>5</sub>	5.0	5.0

DESIGNATED MOVING POSITION  
POSITION DATA OF POINT C

	C <sub>x</sub>	C <sub>y</sub>
t <sub>1</sub>	3.0	2.0
t <sub>2</sub>	3.2	2.2
t <sub>3</sub>	3.4	2.4
t <sub>4</sub>	3.8	2.6
t <sub>5</sub>	4.0	2.8

FIG. 55B

FIG. 55C

FIG. 55D

DATA OF CHANGE IN DESIGNATED  
POSITION-TO-POSITION DISTANCE

5503

	DISTANCE BETWEEN B AND C	MAGNIFICATION (DISTANCE t <sub>n</sub> / DISTANCE t <sub>1</sub> )
t <sub>1</sub>	6.083	100%
t <sub>2</sub>	5.099	84%
t <sub>3</sub>	4.026	66%
t <sub>4</sub>	3.324	55%
t <sub>5</sub>	2.417	40%

FIG. 55E

CONTRACTION OPERATION

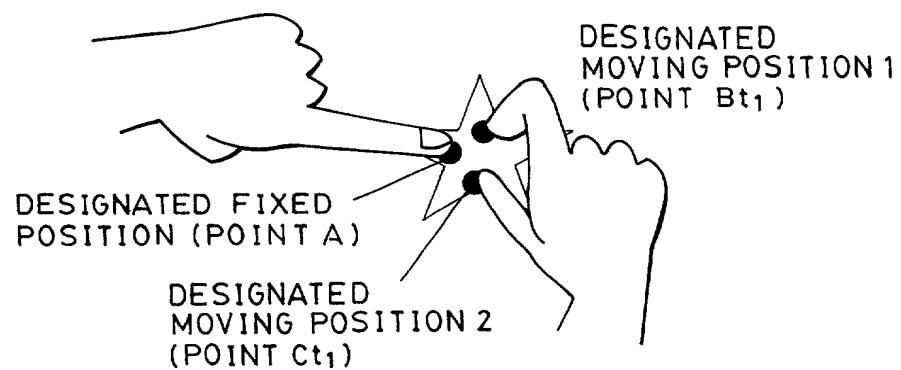


FIG. 56A

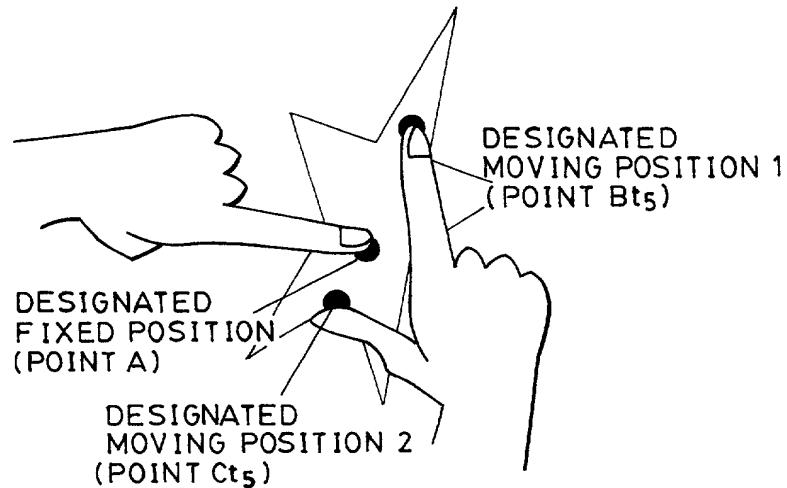


FIG. 56B

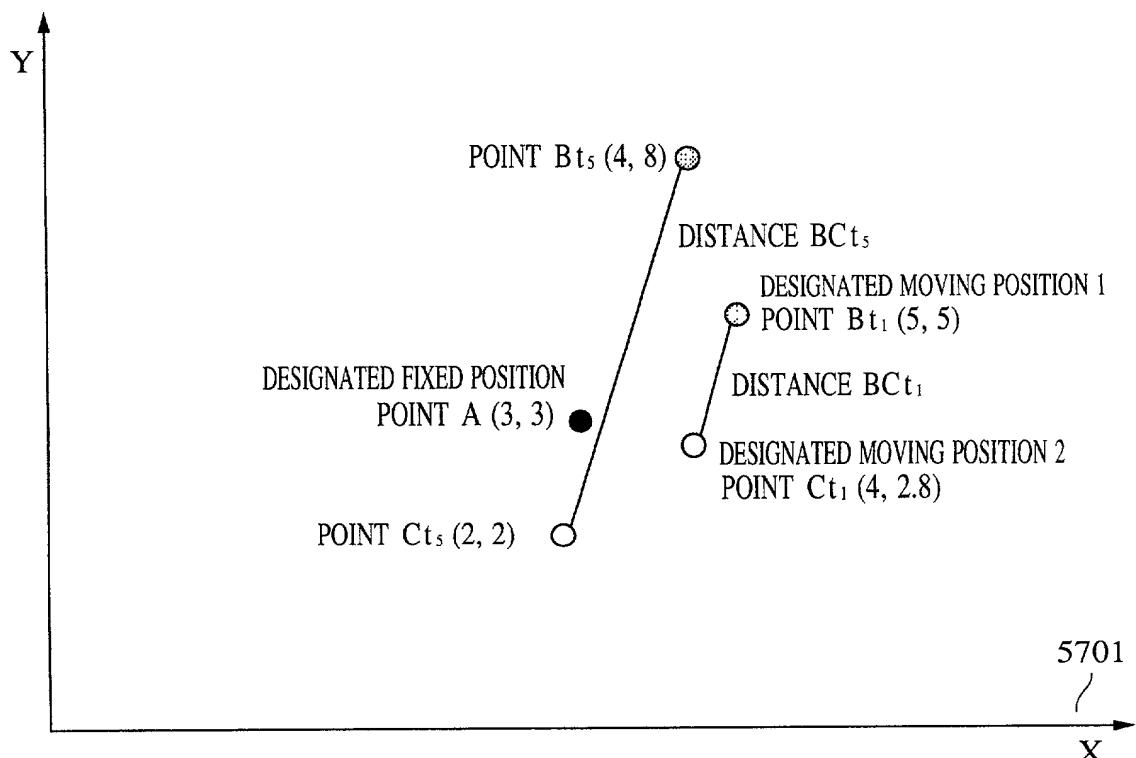


FIG. 57A

DESIGNATED FIXED POSITION  
POSITION DATA OF POINT A

	A <sub>X</sub>	A <sub>Y</sub>
t <sub>1</sub>	3	3
t <sub>2</sub>	3	3
t <sub>3</sub>	3	3
t <sub>4</sub>	3	3
t <sub>5</sub>	3	3

DESIGNATED MOVING POSITION 1  
POSITION DATA OF POINT B

	B <sub>X</sub>	B <sub>Y</sub>
t <sub>1</sub>	5.0	5.0
t <sub>2</sub>	4.7	5.8
t <sub>3</sub>	4.4	6.3
t <sub>4</sub>	4.2	7.2
t <sub>5</sub>	4.0	8.0

DESIGNATED MOVING POSITION 2  
POSITION DATA OF POINT C

	C <sub>X</sub>	C <sub>Y</sub>
t <sub>1</sub>	4.0	2.8
t <sub>2</sub>	3.8	2.6
t <sub>3</sub>	3.4	2.4
t <sub>4</sub>	2.8	2.2
t <sub>5</sub>	2.0	2.0

FIG. 57B

FIG. 57C

FIG. 57D

DATA OF CHANGE IN DESIGNATED  
POSITION-TO-POSITION DISTANCE

	DISTANCE BETWEEN B AND C	MAGNIFICATION (DISTANCE t <sub>n</sub> / DISTANCE t <sub>1</sub> )
t <sub>1</sub>	2.417	100%
t <sub>2</sub>	3.324	138%
t <sub>3</sub>	4.026	167%
t <sub>4</sub>	5.192	215%
t <sub>5</sub>	6.325	262%

5703

FIG. 57E

DESIGNATING A PLURALITY OF MOVING POINTS

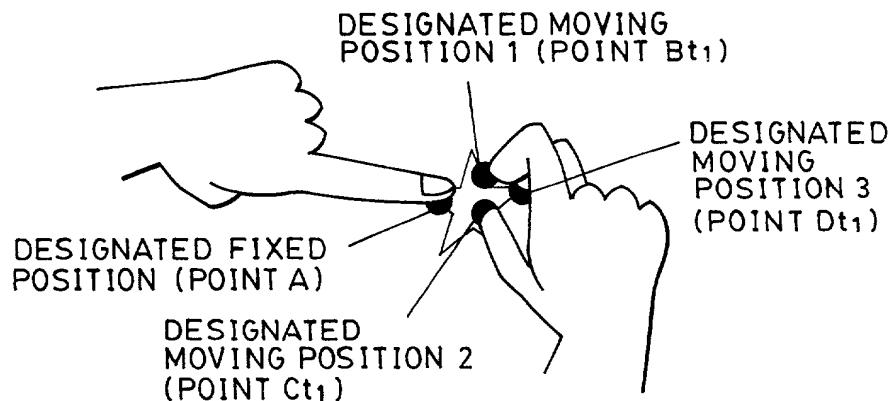


FIG. 58A

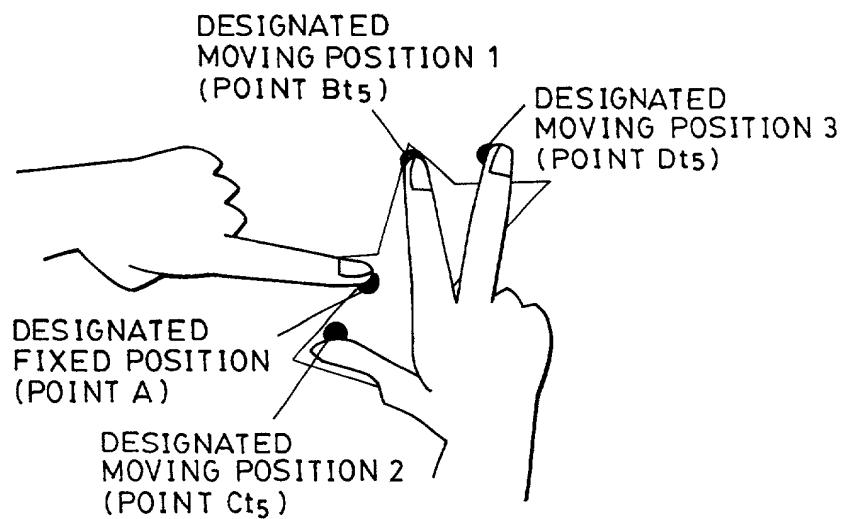


FIG. 58B

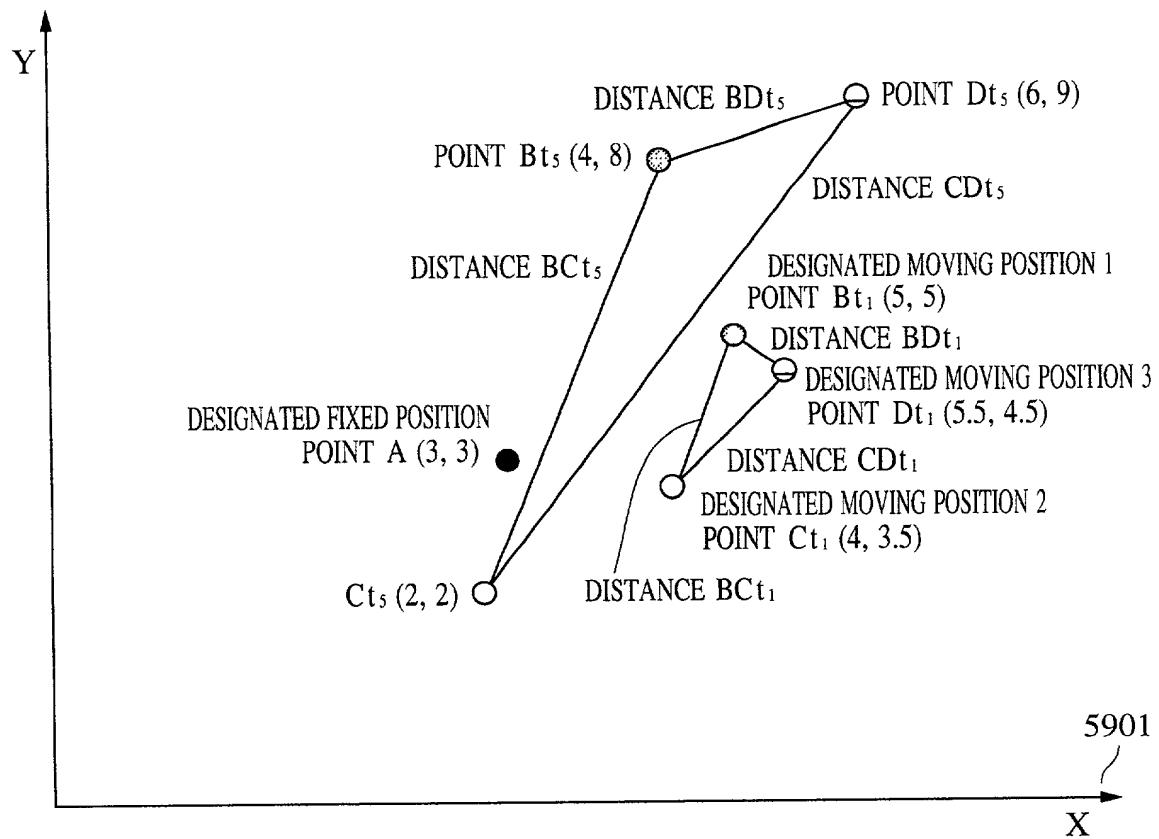


FIG. 59A

DESIGNATED FIXED POSITION  
POSITION DATA OF POINT A

	A <sub>x</sub>	A <sub>y</sub>
t <sub>1</sub>	3	3
t <sub>2</sub>	3	3
t <sub>3</sub>	3	3
t <sub>4</sub>	3	3
t <sub>5</sub>	3	3

FIG. 59B

DESIGNATED MOVING POSITION  
POSITION DATA OF POINT B

	B <sub>x</sub>	B <sub>y</sub>
t <sub>1</sub>	5.0	5.0
t <sub>2</sub>	4.7	5.8
t <sub>3</sub>	4.4	6.3
t <sub>4</sub>	4.2	7.2
t <sub>5</sub>	4.0	8.0

FIG. 59C

DESIGNATED MOVING POSITION  
POSITION DATA OF POINT C

	C <sub>x</sub>	C <sub>y</sub>
t <sub>1</sub>	4.0	3.5
t <sub>2</sub>	3.8	3.3
t <sub>3</sub>	3.4	2.8
t <sub>4</sub>	2.8	2.3
t <sub>5</sub>	2.0	2.0

FIG. 59D

DESIGNATED MOVING POSITION  
POSITION DATA OF POINT D

	D <sub>x</sub>	D <sub>y</sub>
t <sub>1</sub>	5.5	4.5
t <sub>2</sub>	5.6	6.0
t <sub>3</sub>	5.8	7.0
t <sub>4</sub>	5.9	8.0
t <sub>5</sub>	6.0	9.0

FIG. 59E

DATA 1 OF CHANGE IN DESIGNATED  
POSITION-TO-POSITION DISTANCE

DISTANCE BETWEEN B AND C (DISTANCE t <sub>n</sub> / DISTANCE t <sub>1</sub> )	MAGNIFICATION (DISTANCE t <sub>n</sub> / DISTANCE t <sub>1</sub> )
t <sub>1</sub> 1.803	100%
t <sub>2</sub> 2.657	147%
t <sub>3</sub> 3.640	202%
t <sub>4</sub> 5.096	283%
t <sub>5</sub> 6.325	351%

FIG. 59F

DATA 2 OF CHANGE IN DESIGNATED  
POSITION-TO-POSITION DISTANCE

DISTANCE BETWEEN B AND D (DISTANCE t <sub>n</sub> / DISTANCE t <sub>1</sub> )	MAGNIFICATION (DISTANCE t <sub>n</sub> / DISTANCE t <sub>1</sub> )
t <sub>1</sub> 0.707	100%
t <sub>2</sub> 0.922	130%
t <sub>3</sub> 1.565	221%
t <sub>4</sub> 1.879	266%
t <sub>5</sub> 2.236	316%

DATA 3 OF CHANGE IN DESIGNATED  
POSITION-TO-POSITION DISTANCE

DISTANCE BETWEEN C AND D (DISTANCE t <sub>n</sub> / DISTANCE t <sub>1</sub> )	MAGNIFICATION (DISTANCE t <sub>n</sub> / DISTANCE t <sub>1</sub> )
t <sub>1</sub> 1.803	100%
t <sub>2</sub> 3.245	180%
t <sub>3</sub> 4.837	268%
t <sub>4</sub> 6.488	360%
t <sub>5</sub> 8.062	447%

5903

FIG. 59F

FIG. 59G

FIG. 59H

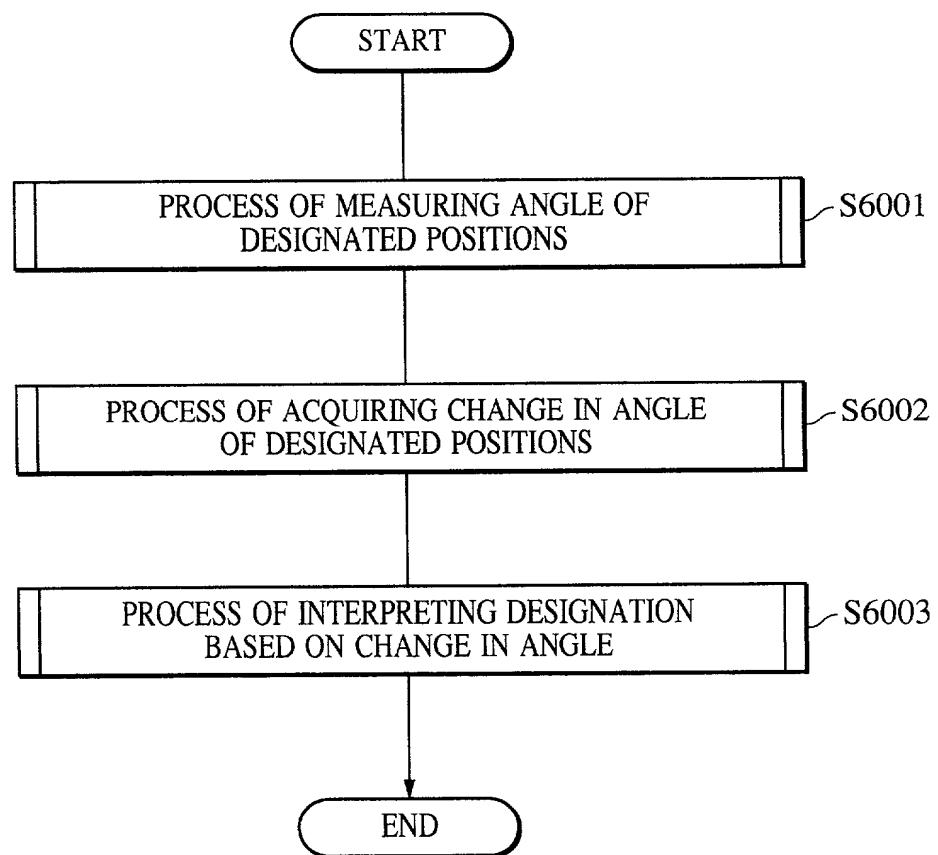


FIG. 60

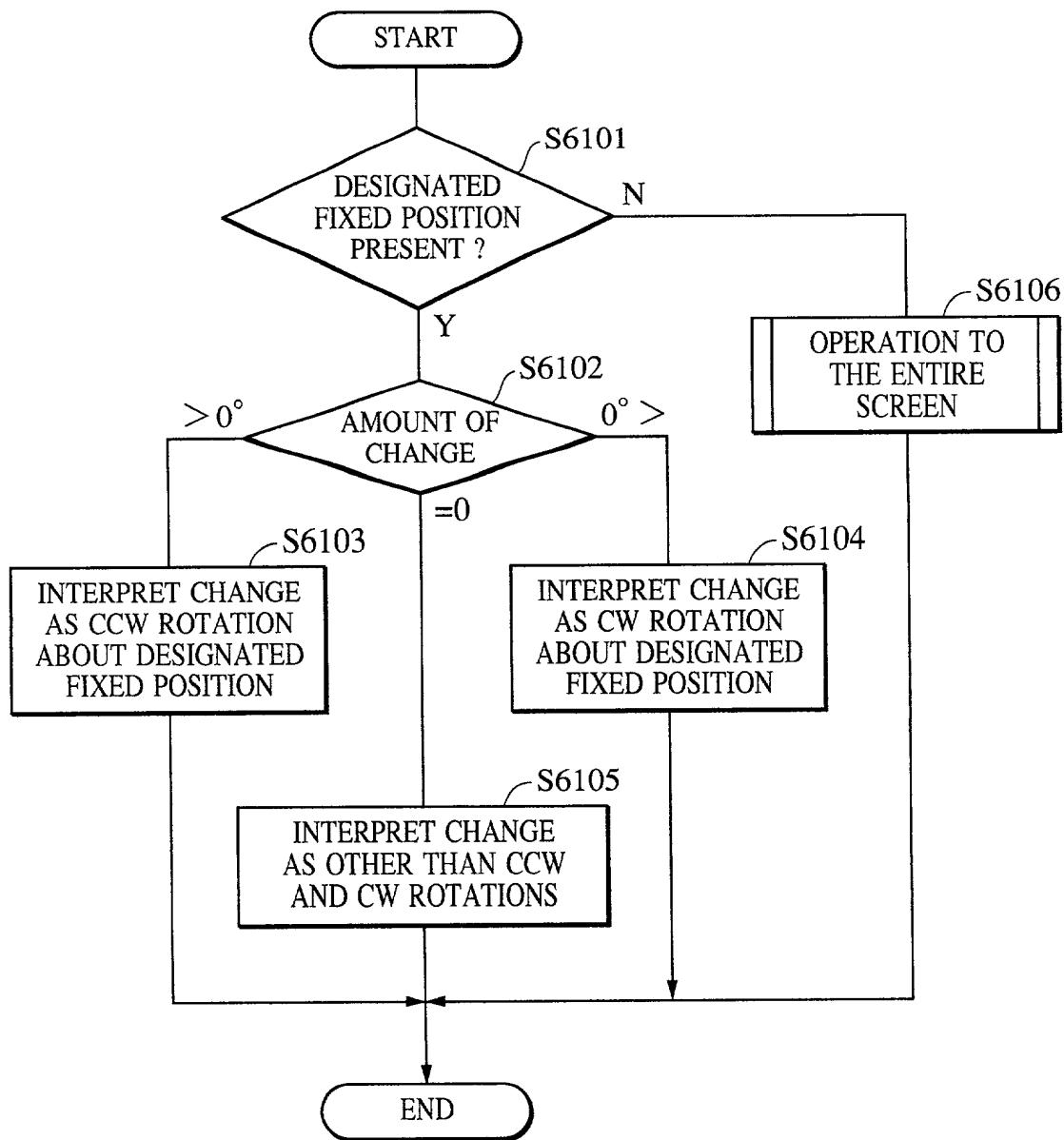


FIG. 61

CW ROTATION OPERATION

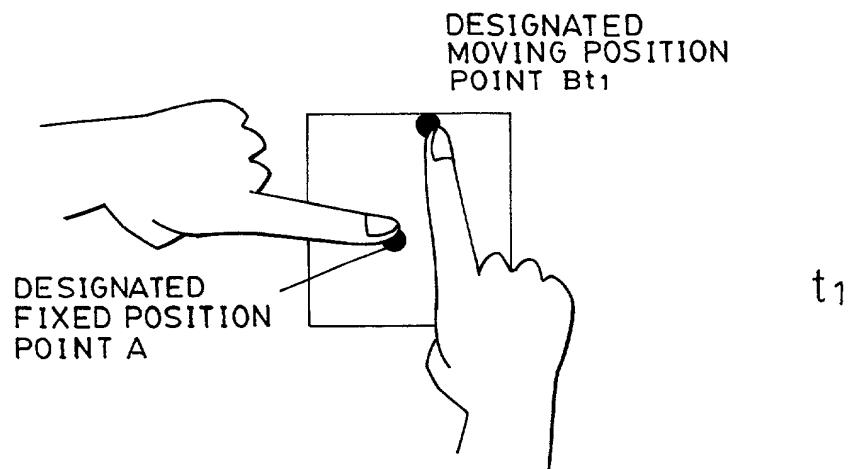


FIG. 62A

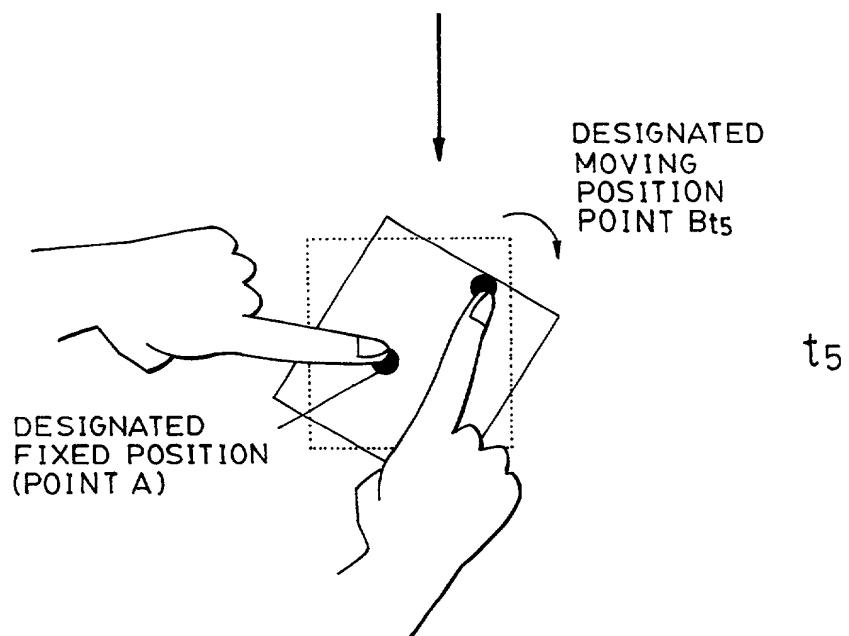


FIG. 62B

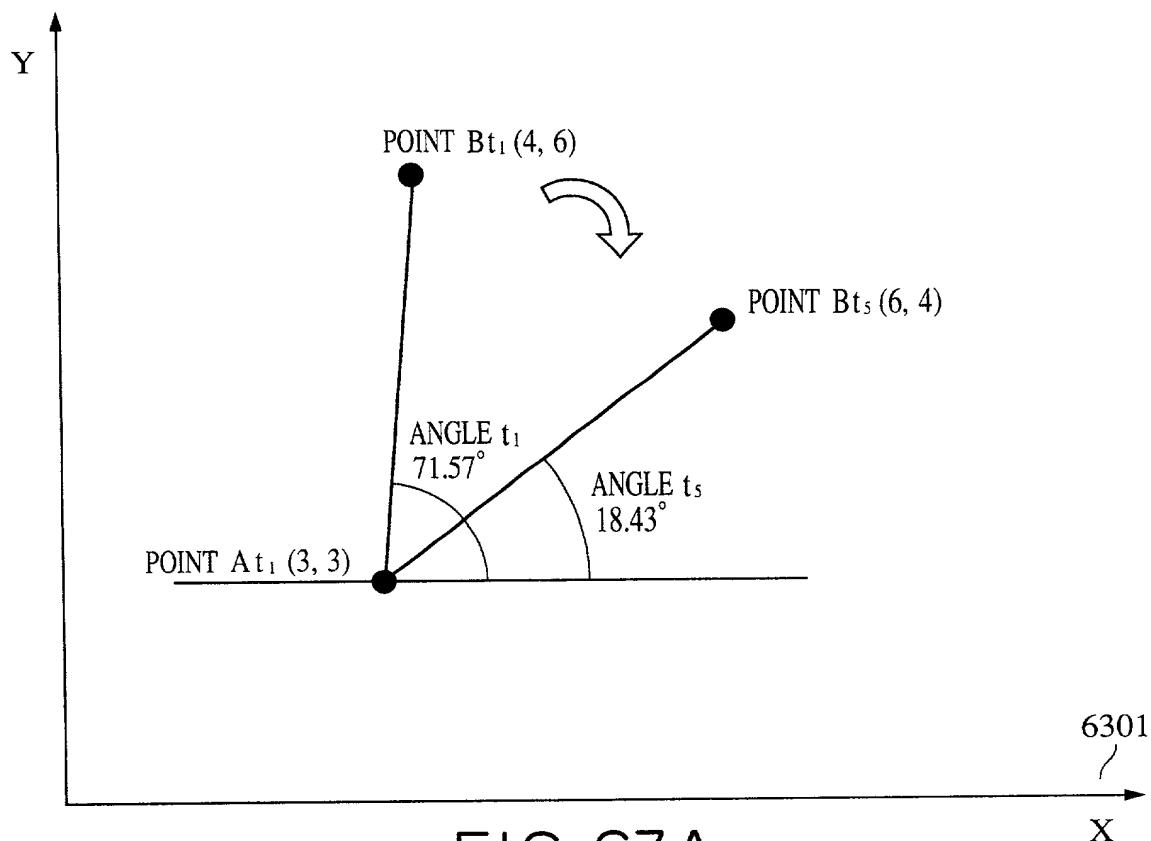


FIG. 63A

DESIGNATED FIXED POSITION  
POSITION DATA OF POINT A

	$A_x$	$A_y$
$t_1$	3	3
$t_2$	3	3
$t_3$	3	3
$t_4$	3	3
$t_5$	3	3

6302A

DESIGNATED MOVING POSITION  
POSITION DATA OF POINT B

	$B_x$	$B_y$
$t_1$	4.0	6.0
$t_2$	4.7	5.7
$t_3$	5.2	5.3
$t_4$	5.7	4.6
$t_5$	6.0	4.0

6302B

FIG. 63B

FIG. 63C

DATA OF CHANGE IN ANGLE OF DESIGNATED POSITIONS

	ANGLE OF DESIGNATED POSITIONS	AMOUNT OF CHANGE
$t_1$	71.57	0.00
$t_2$	57.57	-14.00
$t_3$	45.91	-25.66
$t_4$	30.67	-40.90
$t_5$	18.43	-53.13

6303

FIG. 63D

CCW ROTATION OPERATION

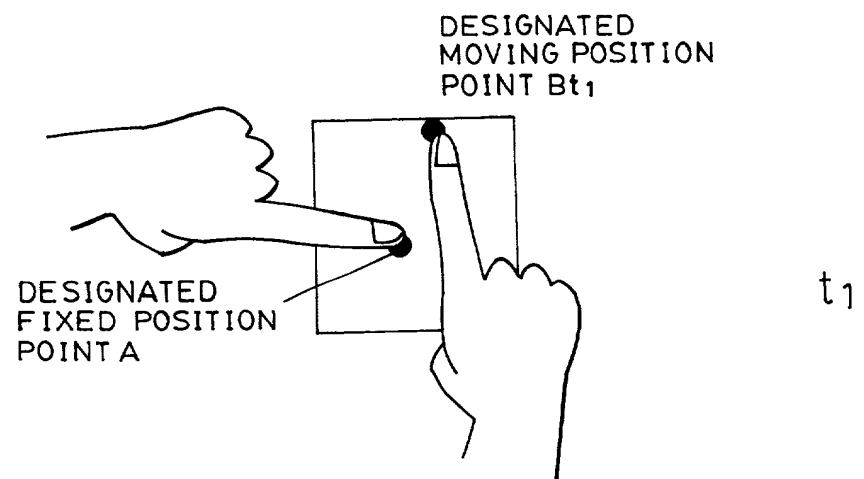


FIG. 64A

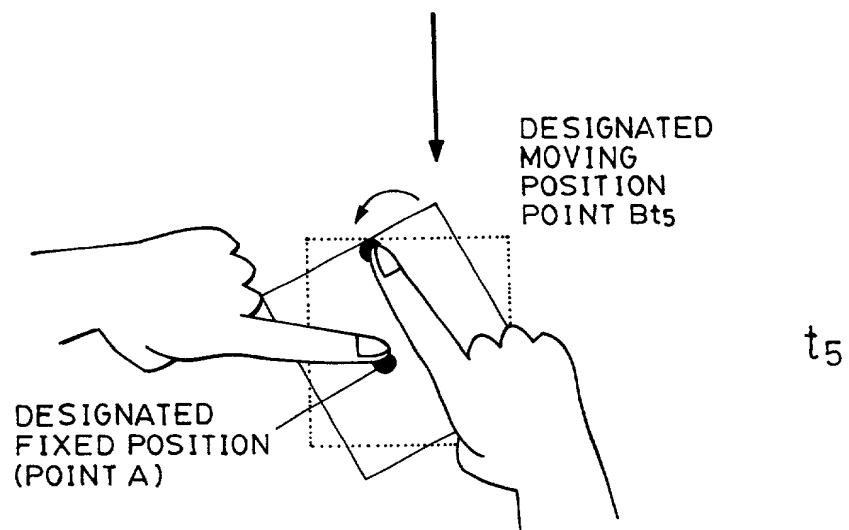


FIG. 64B

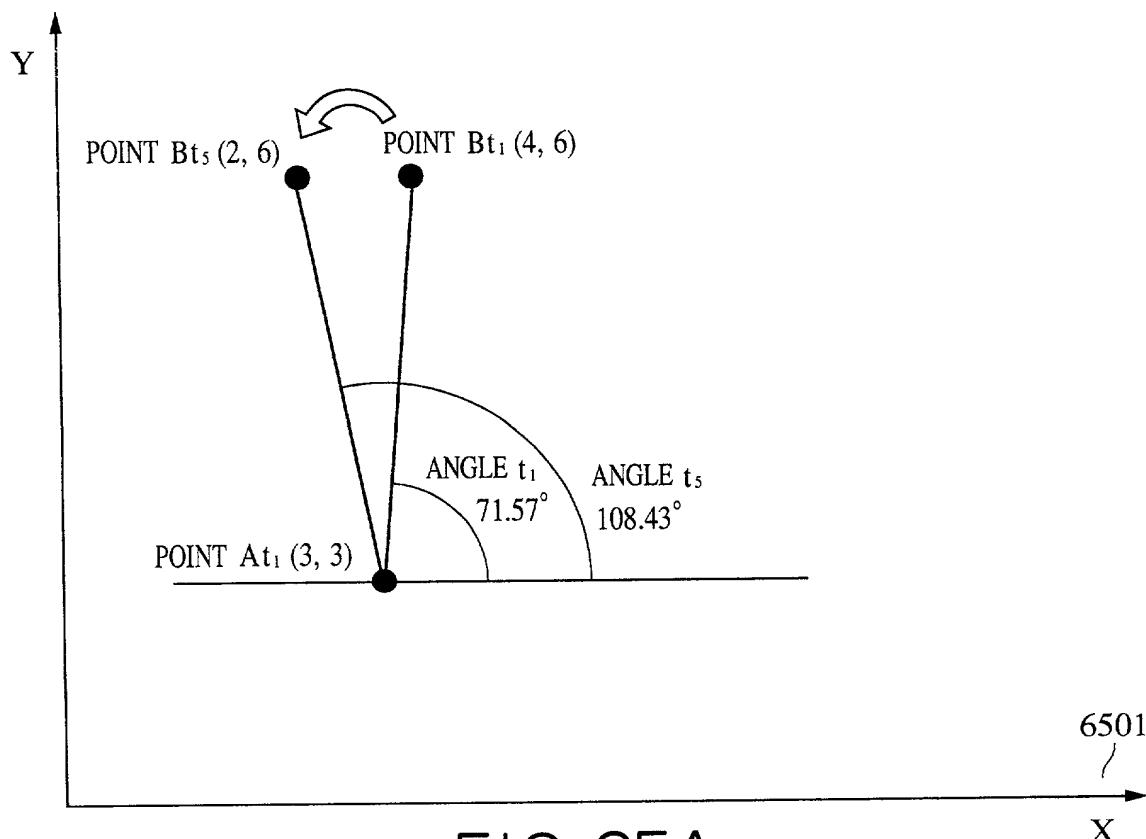


FIG. 65A

DESIGNATED FIXED POSITION  
POSITION DATA OF POINT A

	$A_x$	$A_y$
$t_1$	3	3
$t_2$	3	3
$t_3$	3	3
$t_4$	3	3
$t_5$	3	3

DESIGNATED MOVING POSITION  
POSITION DATA OF POINT B

	$B_x$	$B_y$
$t_1$	4.0	6.0
$t_2$	3.5	6.1
$t_3$	3.0	6.2
$t_4$	2.5	6.1
$t_5$	2.0	6.0

FIG. 65B

DATA OF CHANGE IN ANGLE OF DESIGNATED POSITIONS

	ANGLE OF DESIGNATED FIXED POSITIONS	AMOUNT OF CHANGE
$t_1$	71.57	0.00
$t_2$	80.90	9.34
$t_3$	90.00	18.43
$t_4$	99.10	27.53
$t_5$	108.43	36.87

6503

FIG. 65D

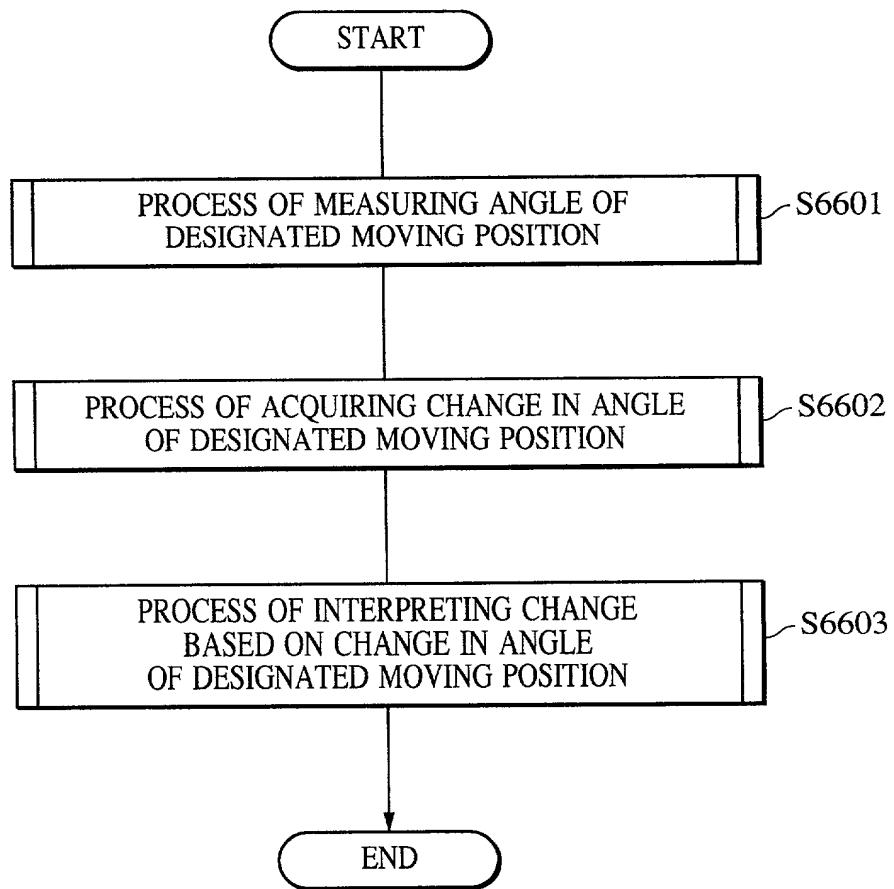


FIG. 66

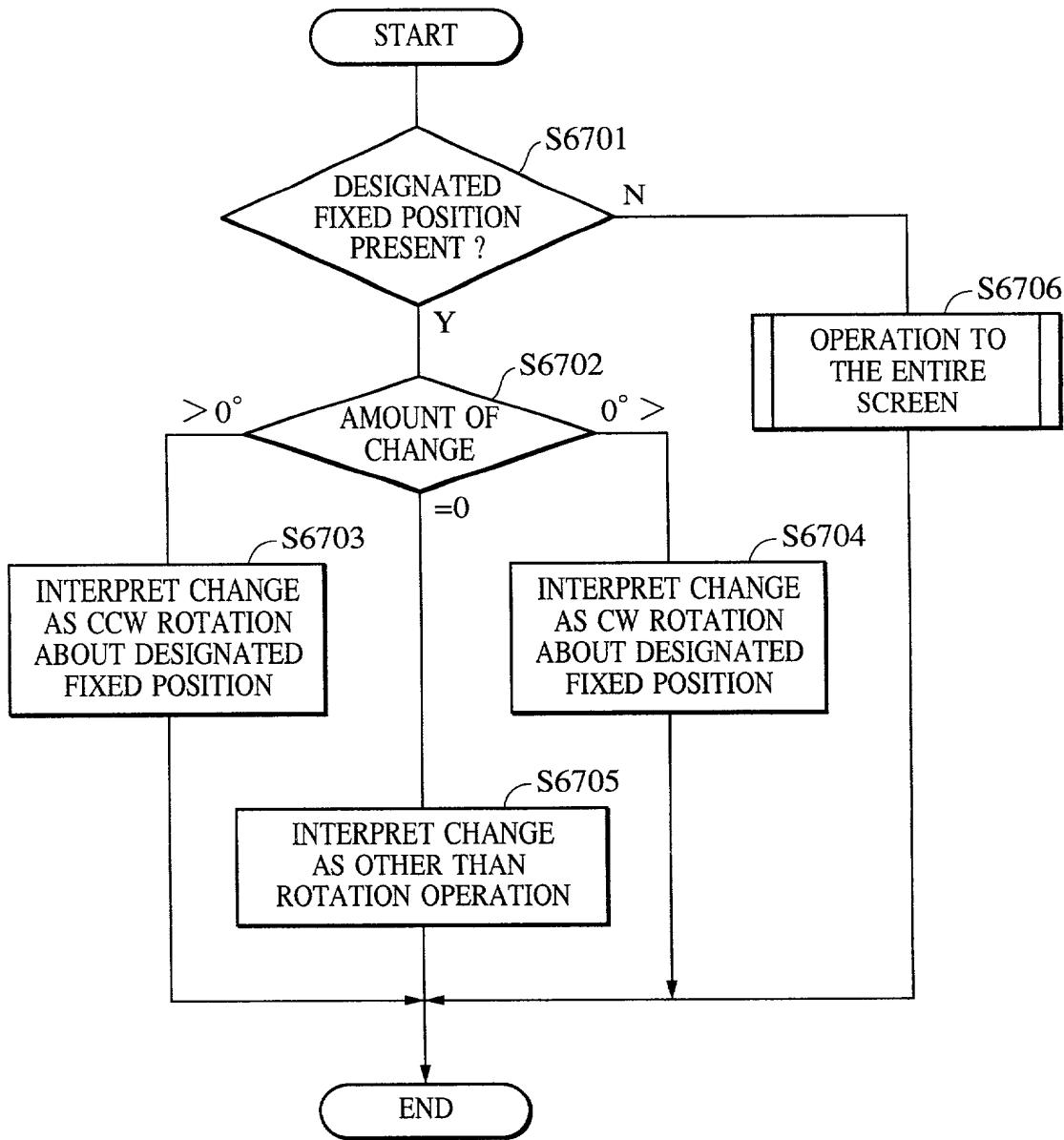


FIG. 67

CW ROTATION OPERATION

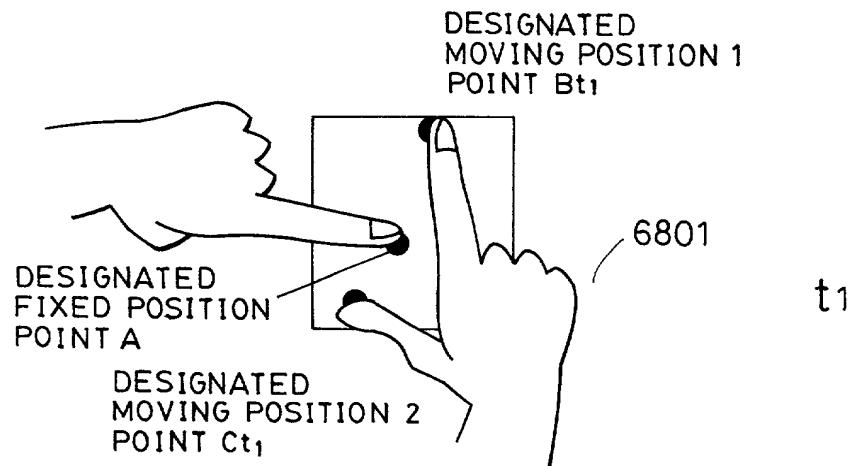


FIG. 68A

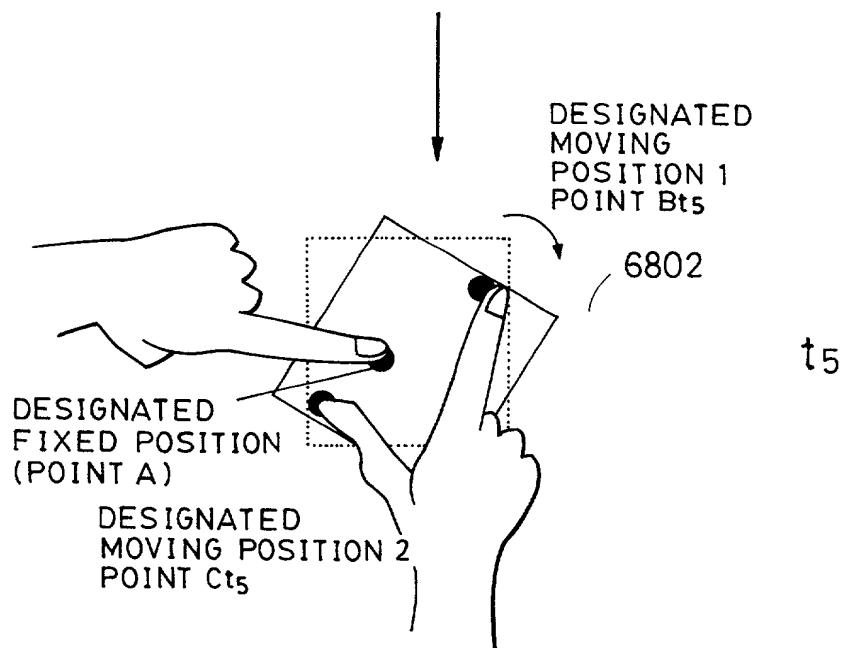


FIG. 68B

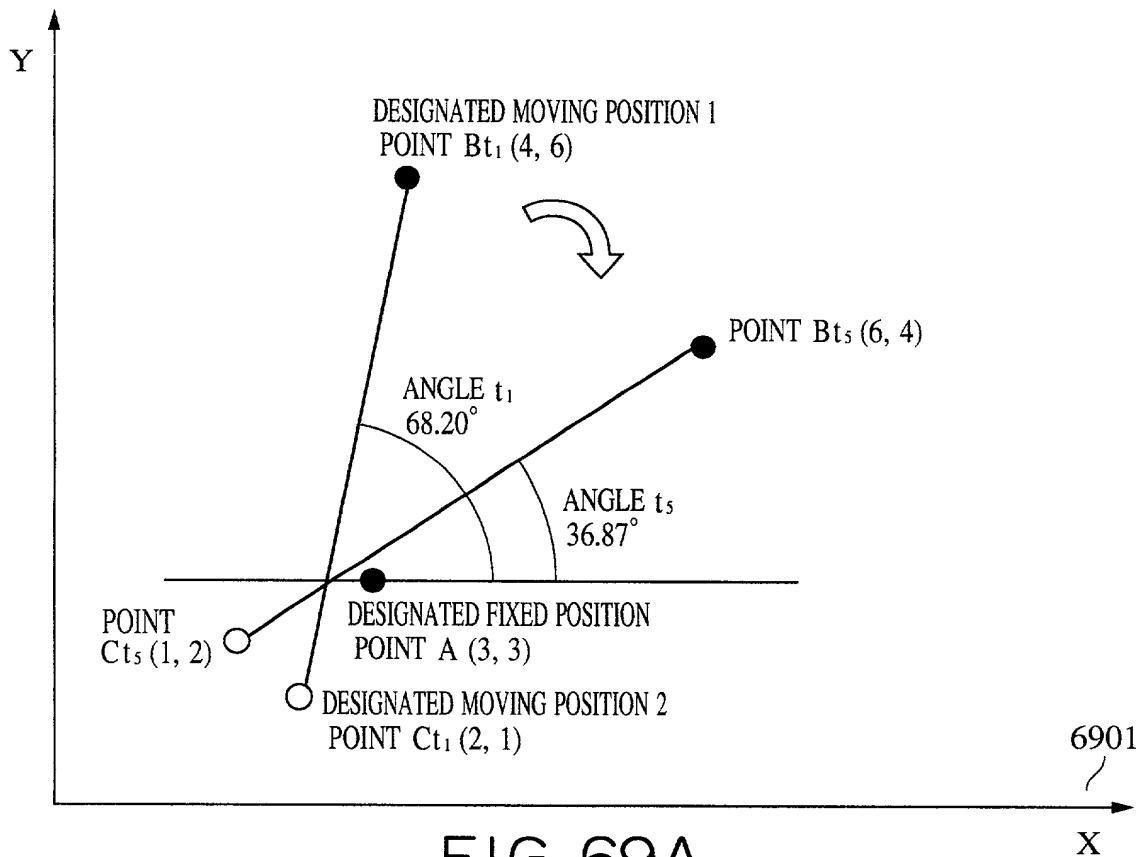


FIG. 69A

DESIGNATED FIXED POSITION  
POSITION DATA OF POINT A

	$A_x$	$A_y$
$t_1$	3	3
$t_2$	3	3
$t_3$	3	3
$t_4$	3	3
$t_5$	3	3

DESIGNATED MOVING POSITION  
POSITION DATA OF POINT B

	$B_x$	$B_y$
$t_1$	4.0	6.0
$t_2$	4.5	5.5
$t_3$	5.0	5.0
$t_4$	5.5	4.5
$t_5$	6.0	4.0

DESIGNATED MOVING POSITION  
POSITION DATA OF POINT C

	$C_x$	$C_y$
$t_1$	2	1
$t_2$	1.8	1.2
$t_3$	1.6	1.5
$t_4$	1.4	1.8
$t_5$	1	2

FIG. 69B

FIG. 69C

FIG. 69D

DATA OF CHANGE IN ANGLE OF DESIGNATED MOVING POSITIONS

	ANGLE OF DESIGNATED MOVING POSITION	AMOUNT OF CHANGE
$t_1$	68.20	0.00
$t_2$	60.95	-7.25
$t_3$	53.13	-15.07
$t_4$	45.00	-23.20
$t_5$	36.87	-31.33

FIG. 69E

6903

6902

CCW ROTATION OPERATION

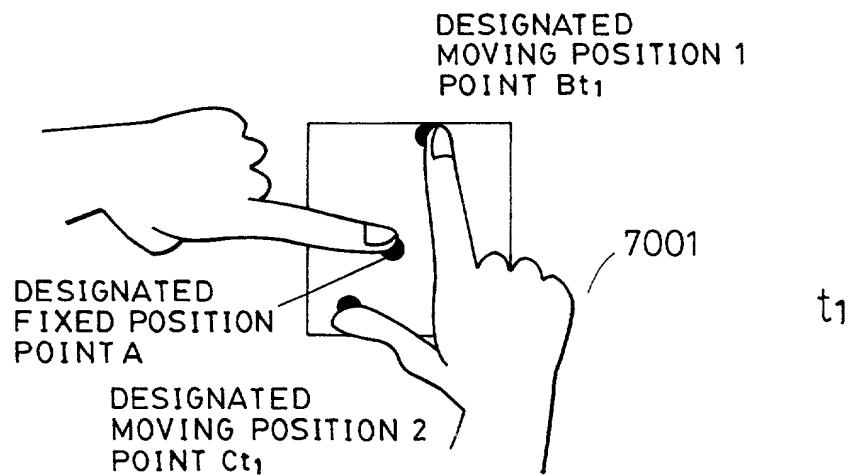


FIG. 70A

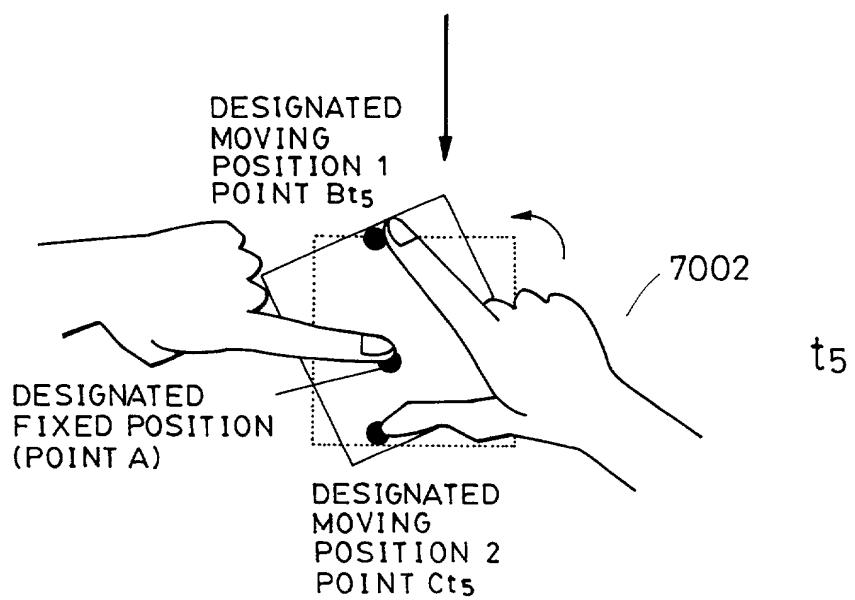


FIG. 70B

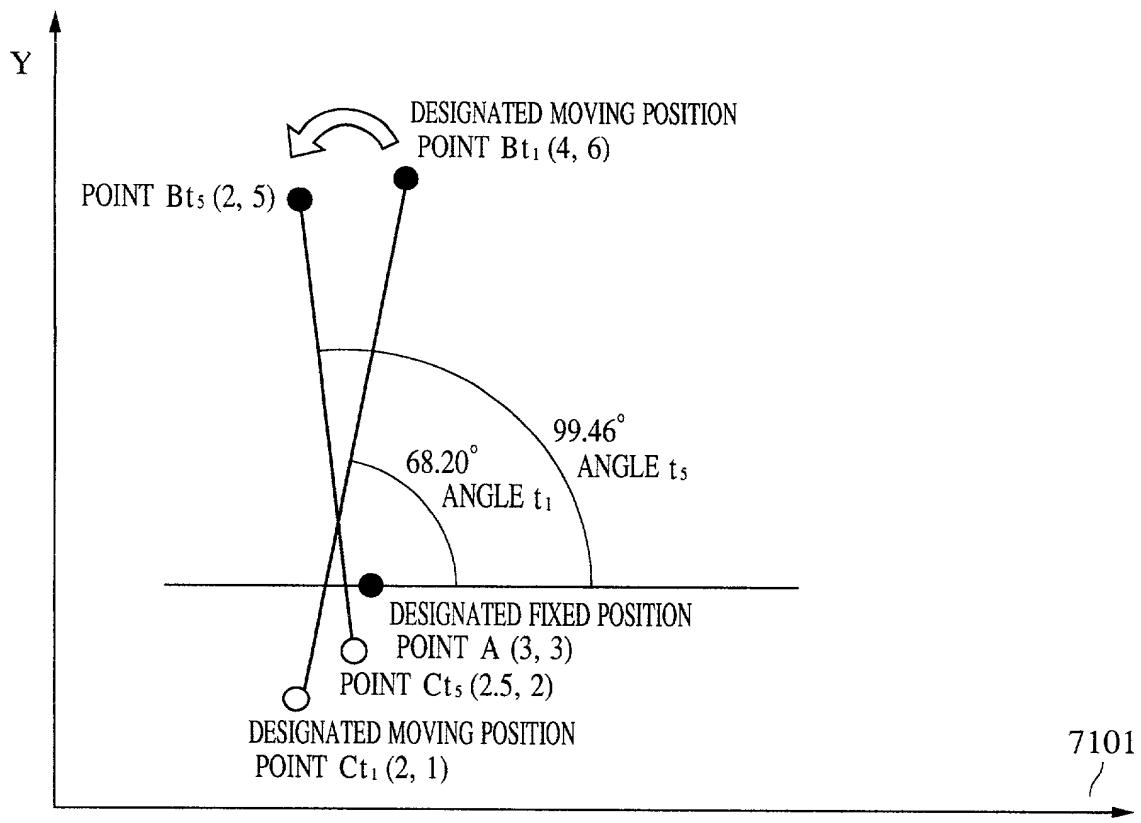


FIG. 71A

DESIGNATED FIXED POSITION  
POSITION DATA OF POINT A

	$A_x$	$A_y$
$t_1$	3	3
$t_2$	3	3
$t_3$	3	3
$t_4$	3	3
$t_5$	3	3

DESIGNATED MOVING POSITION  
POSITION DATA OF POINT B

	$B_x$	$B_y$
$t_1$	4.0	6.0
$t_2$	3.5	5.8
$t_3$	3.0	5.4
$t_4$	2.5	5.2
$t_5$	2.0	5.0

DESIGNATED MOVING POSITION  
POSITION DATA OF POINT C

	$C_x$	$C_y$
$t_1$	2	1
$t_2$	2.1	1.2
$t_3$	2.3	1.5
$t_4$	2.4	1.8
$t_5$	2.5	2

FIG. 71B

FIG. 71C

FIG. 71D

DATA OF CHANGE IN ANGLE OF DESIGNATED MOVING POSITIONS

	ANGLE OF DESIGNATED MOVING POSITION	AMOUNT OF CHANGE
$t_1$	68.20	0.00
$t_2$	73.07	4.87
$t_3$	79.82	11.63
$t_4$	88.32	20.12
$t_5$	99.46	31.26

FIG. 71E

7103

7102

ROTATION OPERATION ABOUT THE CENTER OF GRAVITY OF DESIGNATED MOVING POSITION

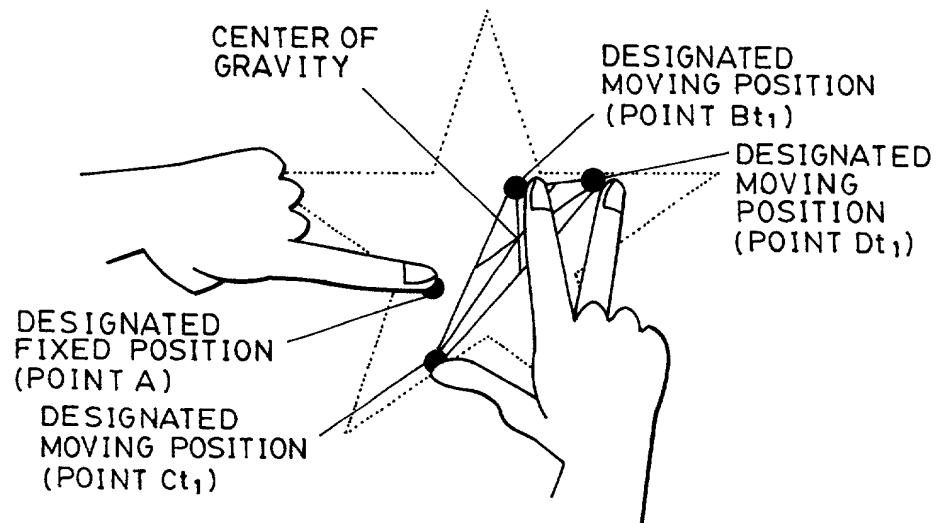


FIG. 72A

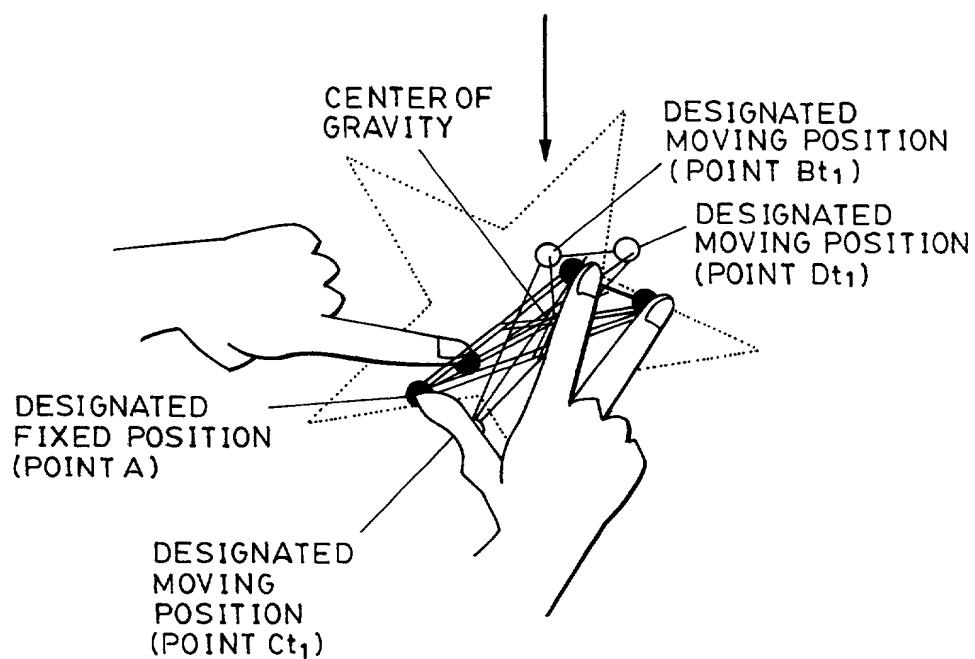


FIG. 72B

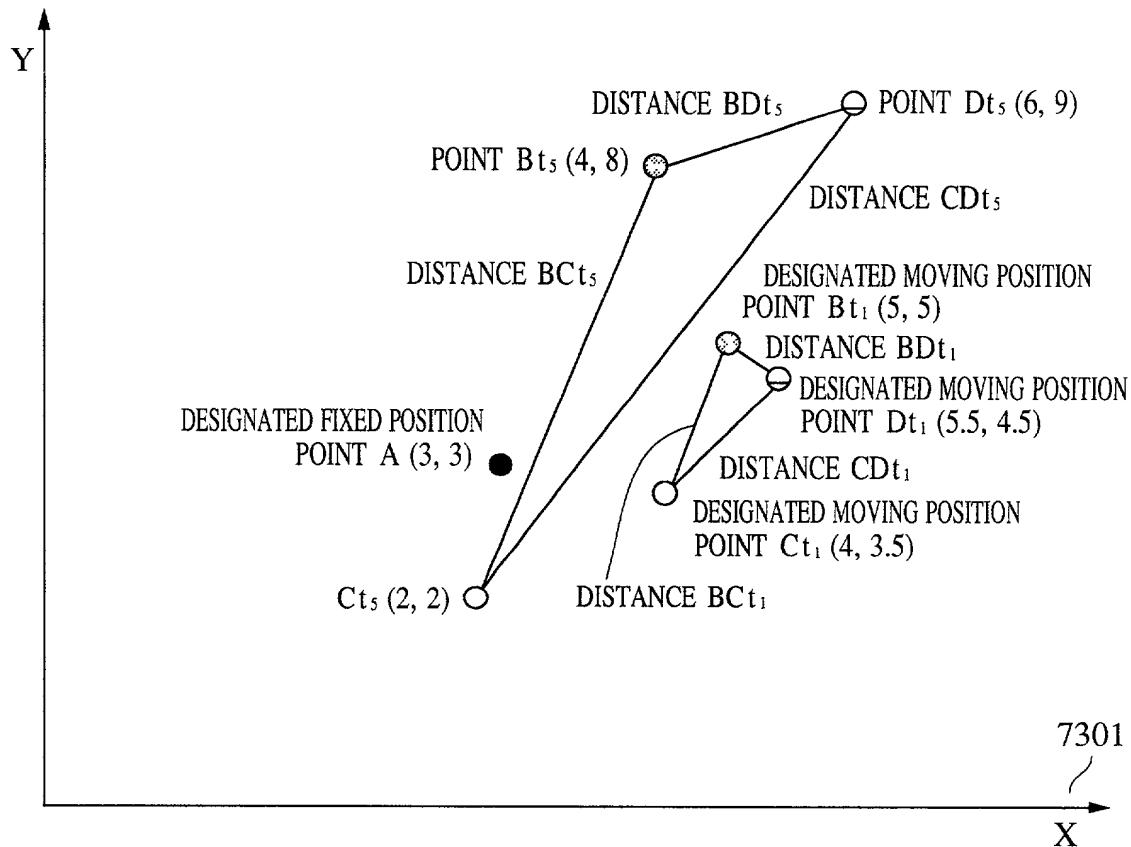


FIG. 73A

DESIGNATED FIXED POSITION  
POSITION DATA OF POINT A

	A <sub>x</sub>	A <sub>y</sub>
t <sub>1</sub>	3	3
t <sub>2</sub>	3	3
t <sub>3</sub>	3	3
t <sub>4</sub>	3	3
t <sub>5</sub>	3	3

FIG. 73B

DESIGNATED MOVING POSITION  
POSITION DATA OF POINT B

	B <sub>x</sub>	B <sub>y</sub>
t <sub>1</sub>	5.0	5.0
t <sub>2</sub>	4.7	5.8
t <sub>3</sub>	4.4	6.3
t <sub>4</sub>	4.2	7.2
t <sub>5</sub>	4.0	8.0

FIG. 73D

DESIGNATED MOVING POSITION  
POSITION DATA OF POINT C

	C <sub>x</sub>	C <sub>y</sub>
t <sub>1</sub>	4.0	3.5
t <sub>2</sub>	3.8	3.3
t <sub>3</sub>	3.4	2.8
t <sub>4</sub>	2.8	2.3
t <sub>5</sub>	2.0	2.0

FIG. 73E

DESIGNATED MOVING POSITION  
POSITION DATA OF POINT D

	D <sub>x</sub>	D <sub>y</sub>
t <sub>1</sub>	5.5	4.5
t <sub>2</sub>	5.6	6.0
t <sub>3</sub>	5.8	7.0
t <sub>4</sub>	5.9	8.0
t <sub>5</sub>	6.0	9.0

FIG. 73F

7303			
DATA OF CHANGE IN DESIGNATED POSITION-TO-POSITION DISTANCE			
DATA OF CHANGE IN DESIGNATED POSITION-TO-POSITION DISTANCE			
DISTANCE BETWEEN B AND C (DISTANCE t <sub>n</sub> /DISTANCE t <sub>1</sub> )	DISTANCE BETWEEN B AND D (DISTANCE t <sub>n</sub> /DISTANCE t <sub>1</sub> )	MAGNIFICATION BETWEEN C AND D (DISTANCE t <sub>n</sub> /DISTANCE t <sub>1</sub> )	MAGNIFICATION (DISTANCE t <sub>n</sub> /DISTANCE t <sub>1</sub> )
t <sub>1</sub>	1.803	100%	t <sub>1</sub>
t <sub>2</sub>	2.657	147%	t <sub>2</sub>
t <sub>3</sub>	3.640	202%	t <sub>3</sub>
t <sub>4</sub>	5.096	283%	t <sub>4</sub>
t <sub>5</sub>	6.325	351%	t <sub>5</sub>

FIG. 73G

FIG. 73H

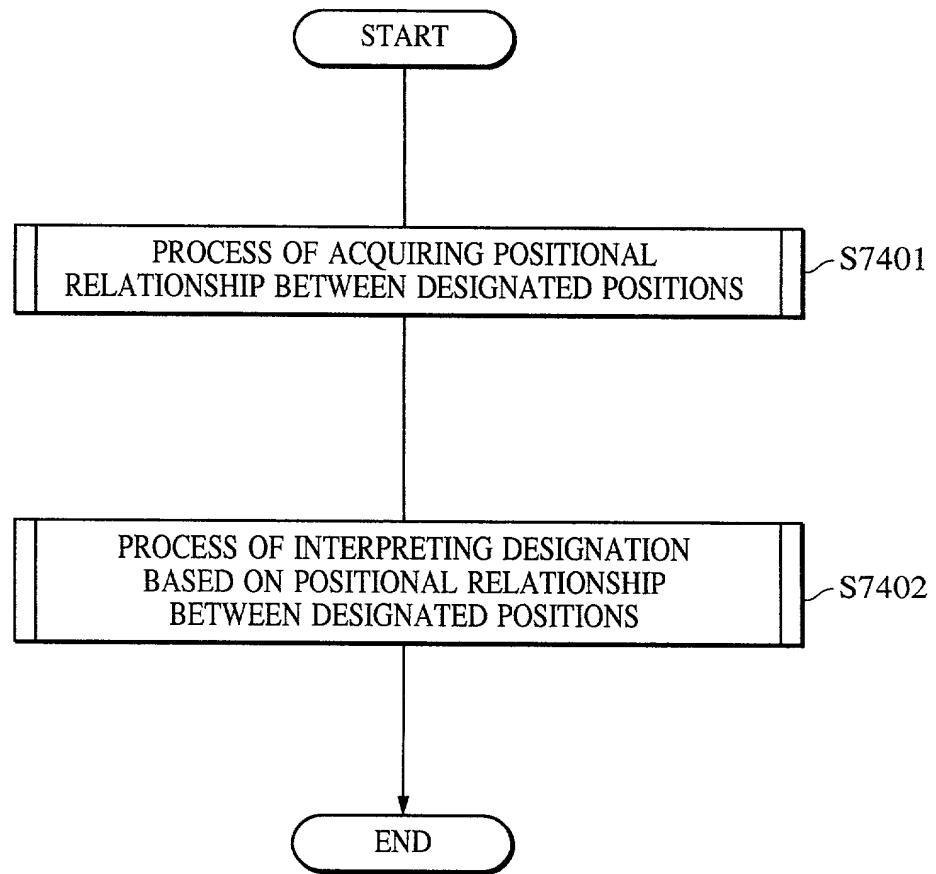


FIG. 74

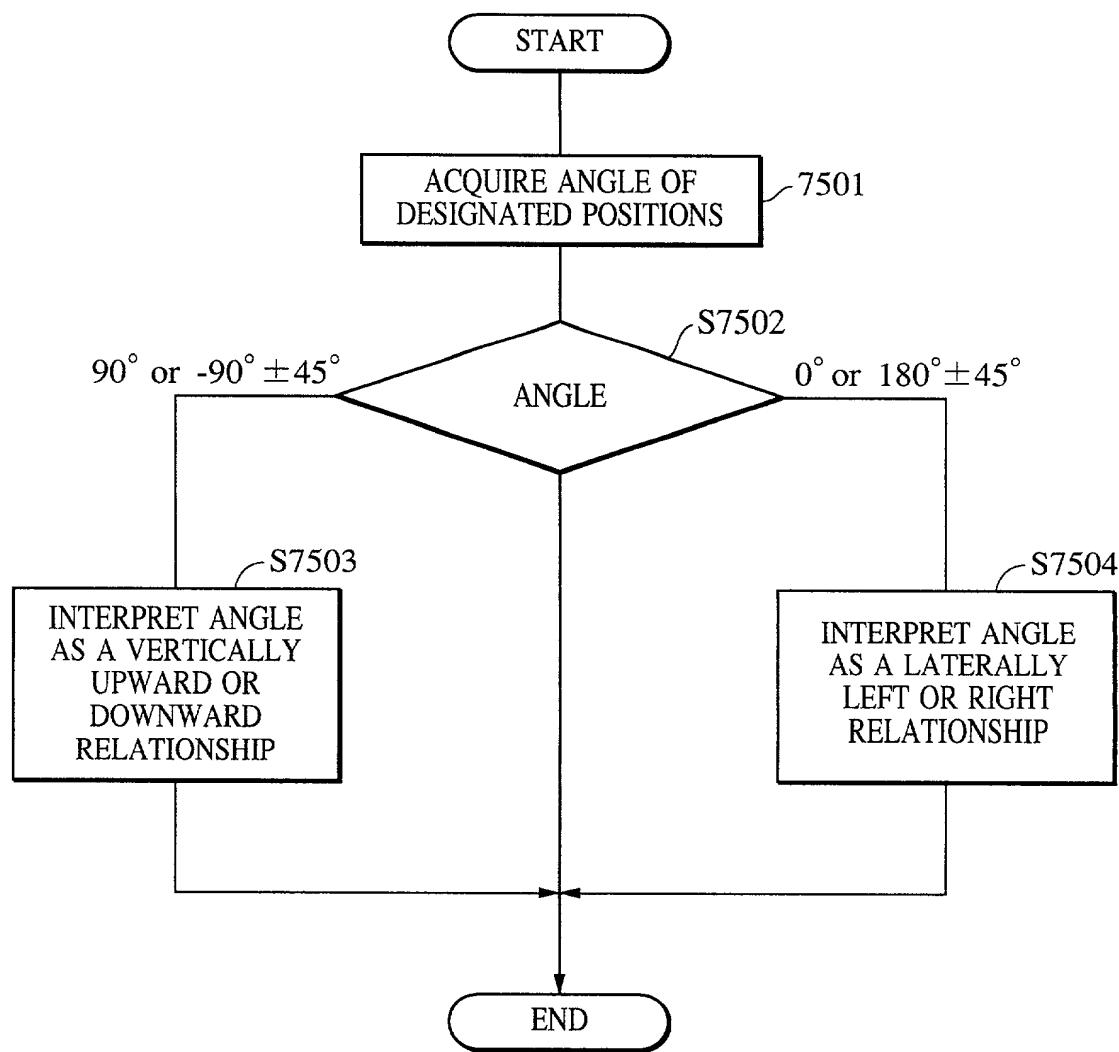


FIG. 75

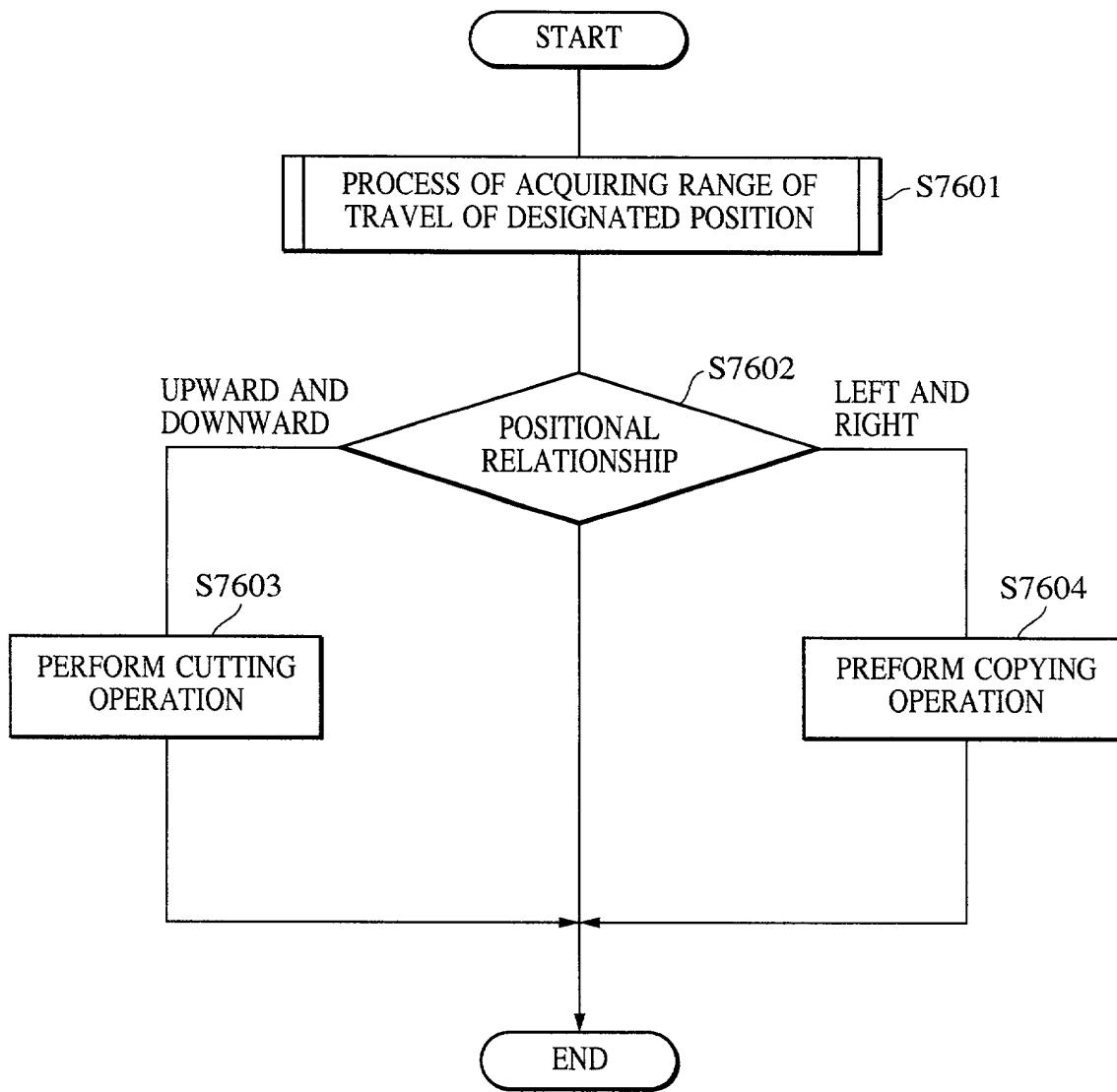


FIG. 76

PARALLEL TRAVEL WITH VERTICAL  
RELATIONSHIP MAINTAINED

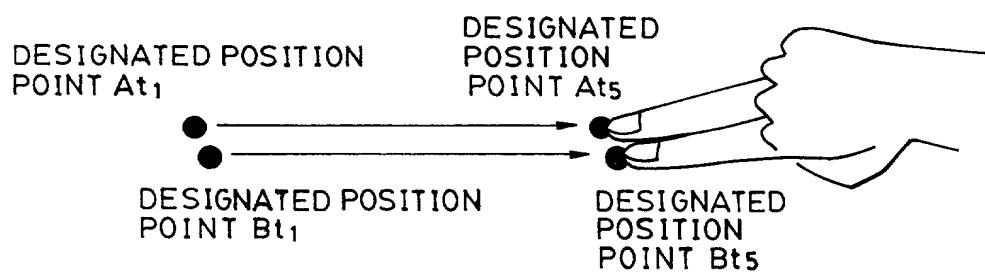


FIG. 77

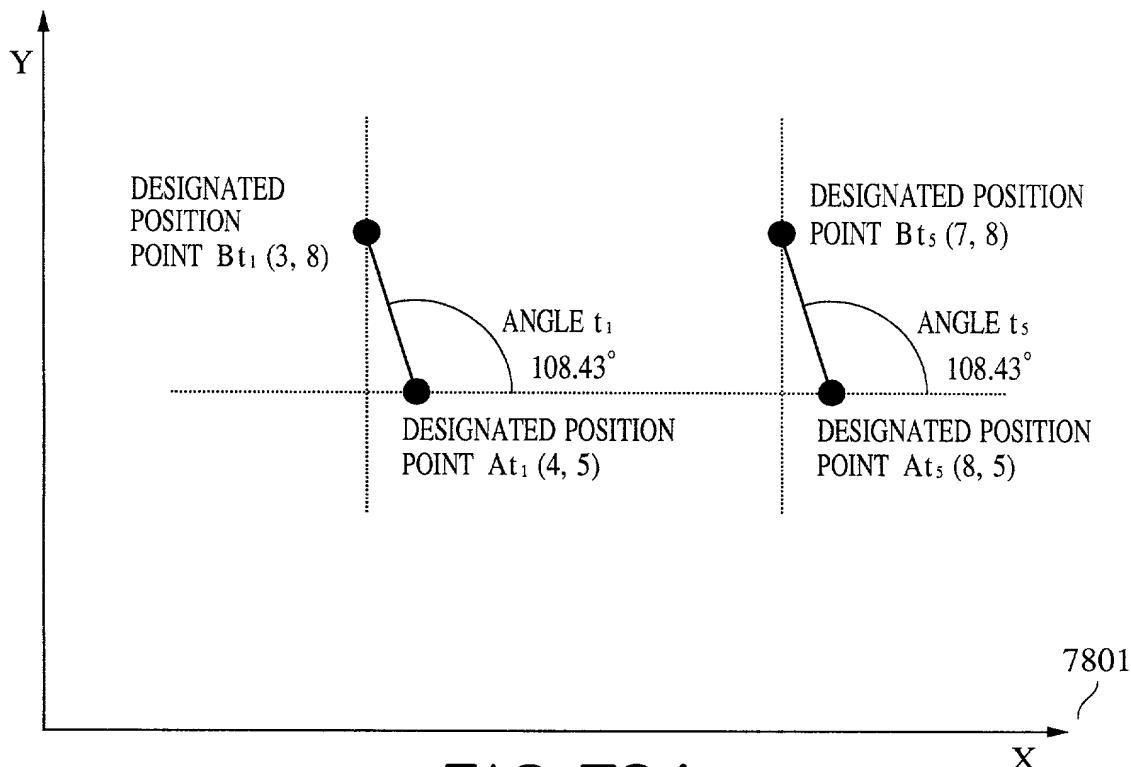


FIG. 78A

DESIGNATED POSITION POSITION DATA OF POINT A

	$A_x$	$A_y$
$t_1$	4.0	5.0
$t_2$	5.0	5.0
$t_3$	6.0	5.0
$t_4$	7.0	5.0
$t_5$	8.0	5.0

FIG. 78B

DESIGNATED POSITION POSITION DATA OF POINT B

	$B_x$	$B_y$
$t_1$	3.0	8.0
$t_2$	4.0	8.0
$t_3$	5.0	8.0
$t_4$	6.0	8.0
$t_5$	7.0	8.0

FIG. 78C

POSITION DATA OF DESIGNATED POSITIONS

	ANGLE OF DESIGNATED POSITIONS
$t_1$	108.43
$t_2$	108.43
$t_3$	108.43
$t_4$	108.43
$t_5$	108.43

7803

FIG. 78D

PARALLEL TRAVEL WITH LATERAL  
RELATIONSHIP MAINTAINED

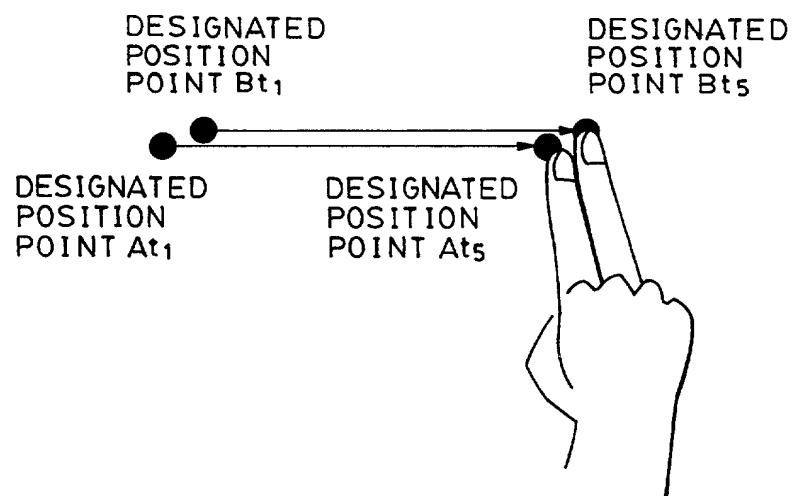


FIG. 79

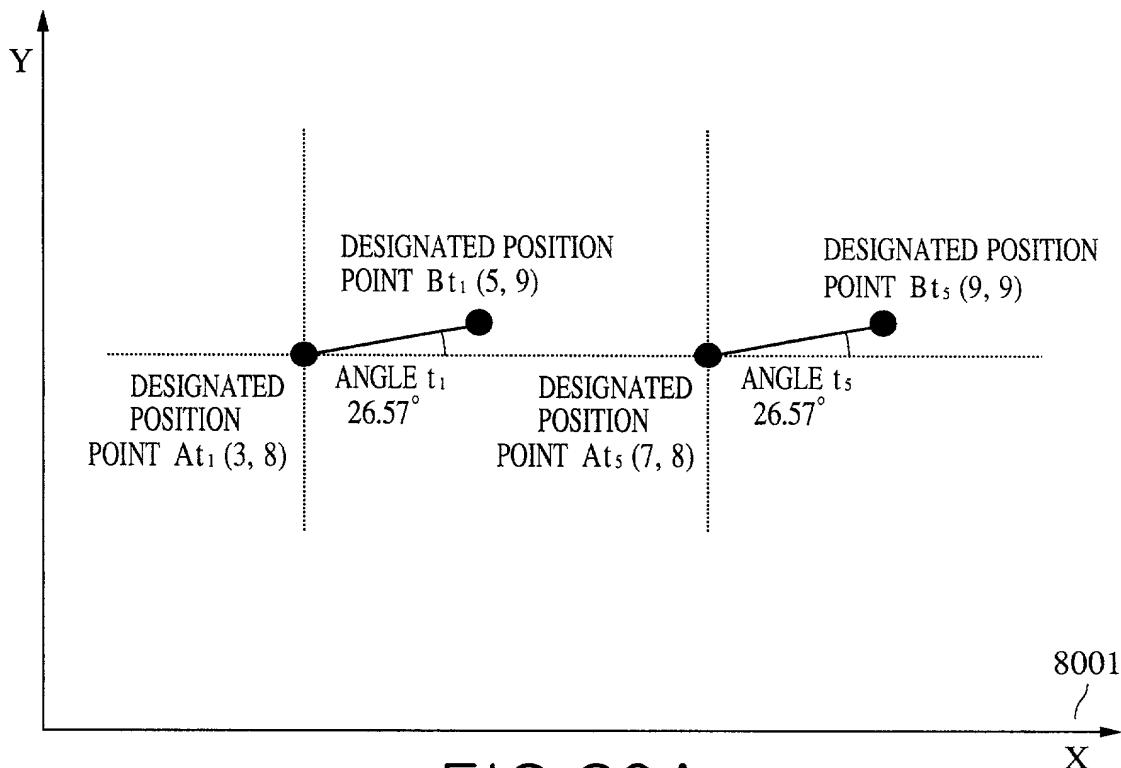


FIG. 80A

DESIGNATED POSITION  
POSITION DATA OF POINT A

	$A_x$	$A_y$
$t_1$	3.0	8.0
$t_2$	4.0	8.0
$t_3$	5.0	8.0
$t_4$	6.0	8.0
$t_5$	7.0	8.0

FIG. 80B

DESIGNATED POSITION  
POSITION DATA OF POINT B

	$B_x$	$B_y$
$t_1$	5.0	9.0
$t_2$	6.0	9.0
$t_3$	7.0	9.0
$t_4$	8.0	9.0
$t_5$	9.0	9.0

8002

FIG. 80C

POSITION DATA OF DESIGNATED POSITIONS

	ANGLE OF DESIGNATED POSITIONS
$t_1$	26.57
$t_2$	26.57
$t_3$	26.57
$t_4$	26.57
$t_5$	26.57

8003

FIG. 80D

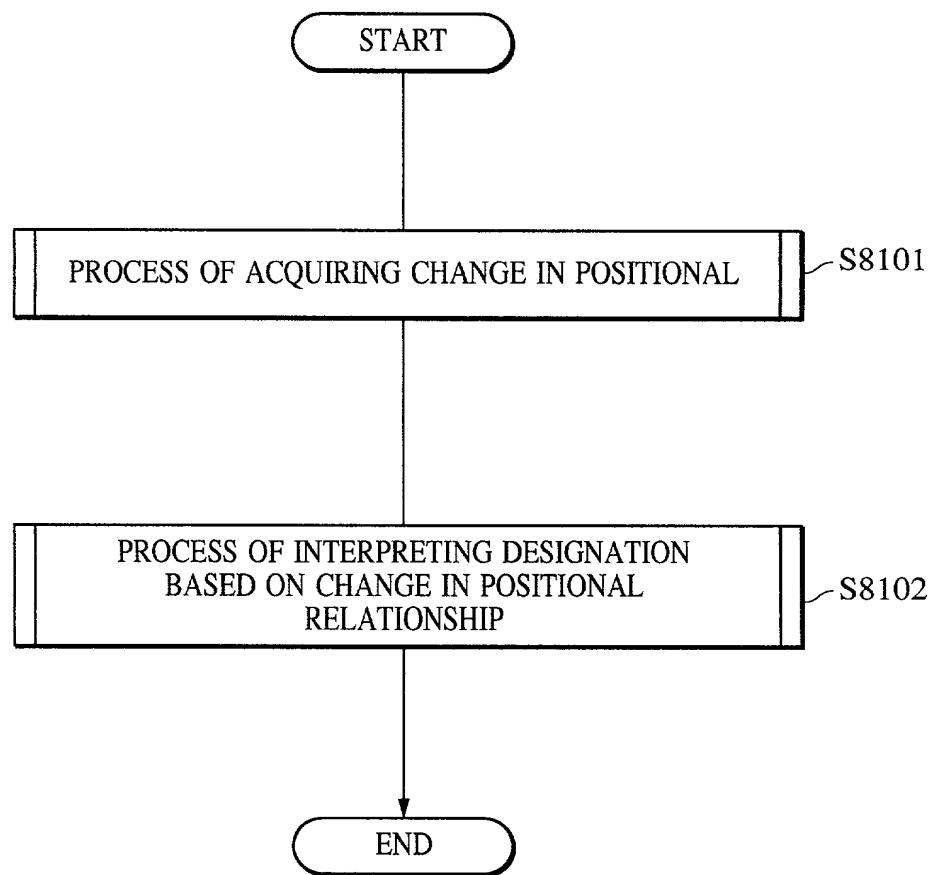


FIG. 81

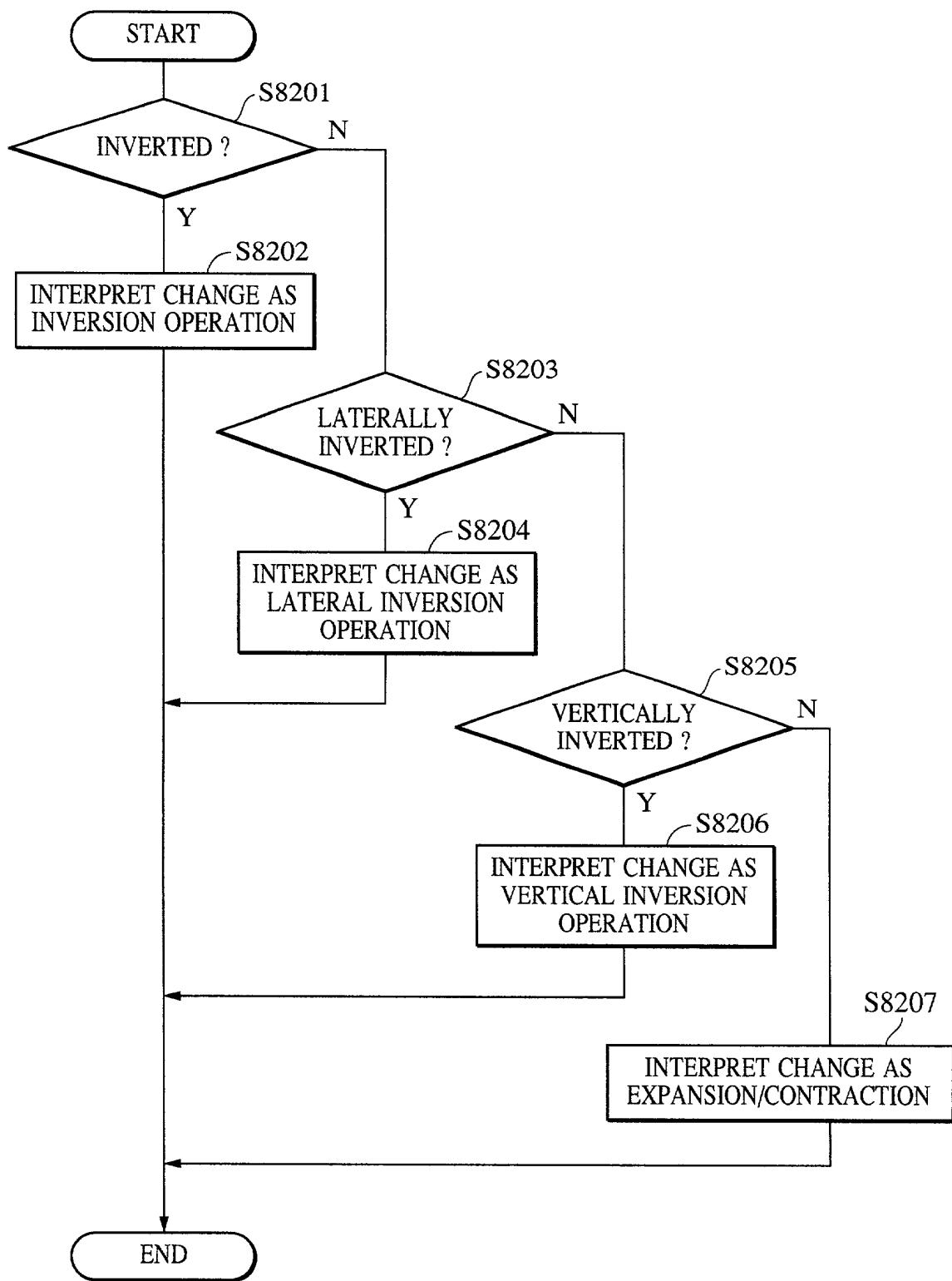


FIG. 82

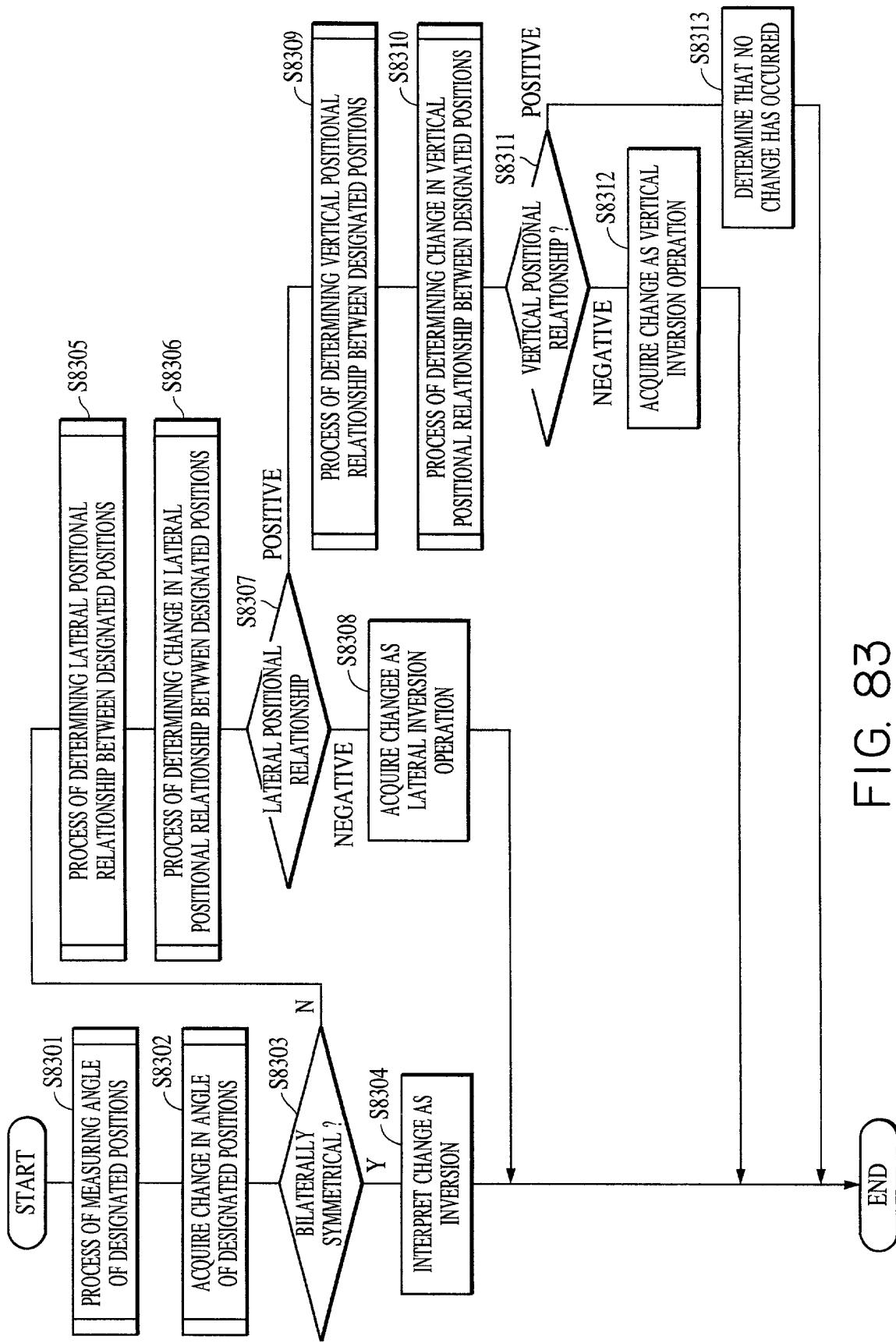


FIG. 83

REVERSAL OPERATION

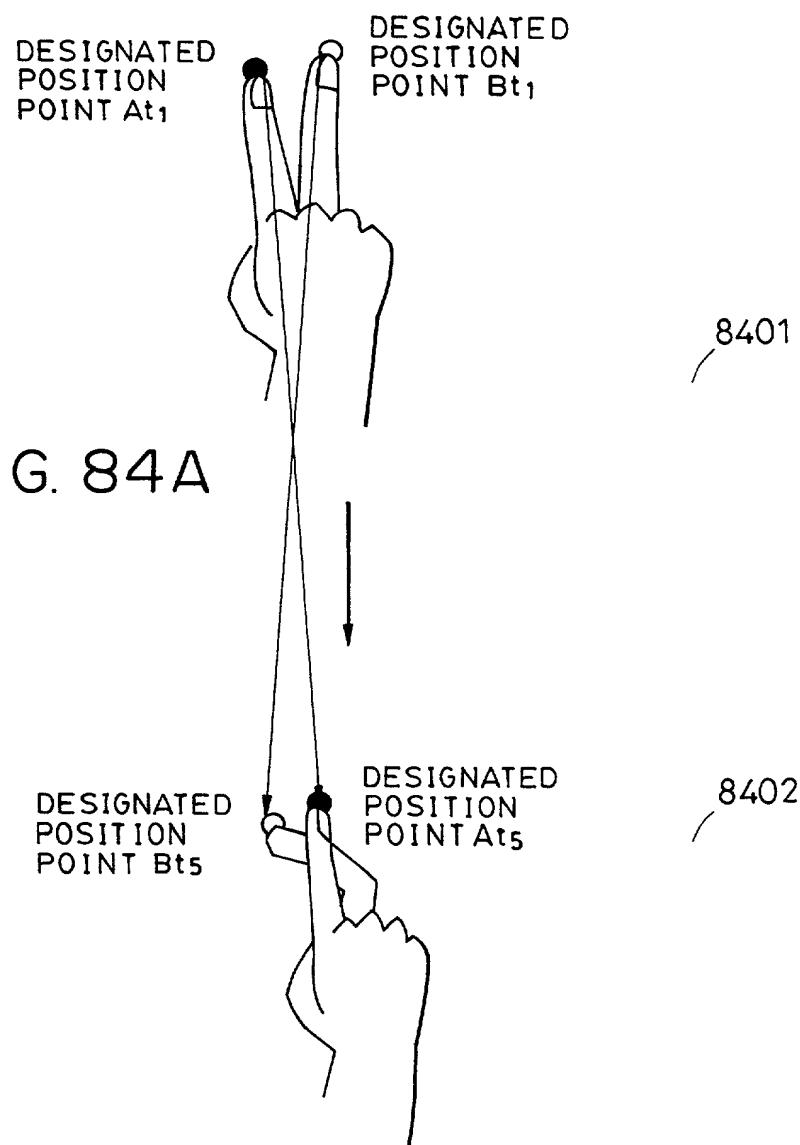


FIG. 84B

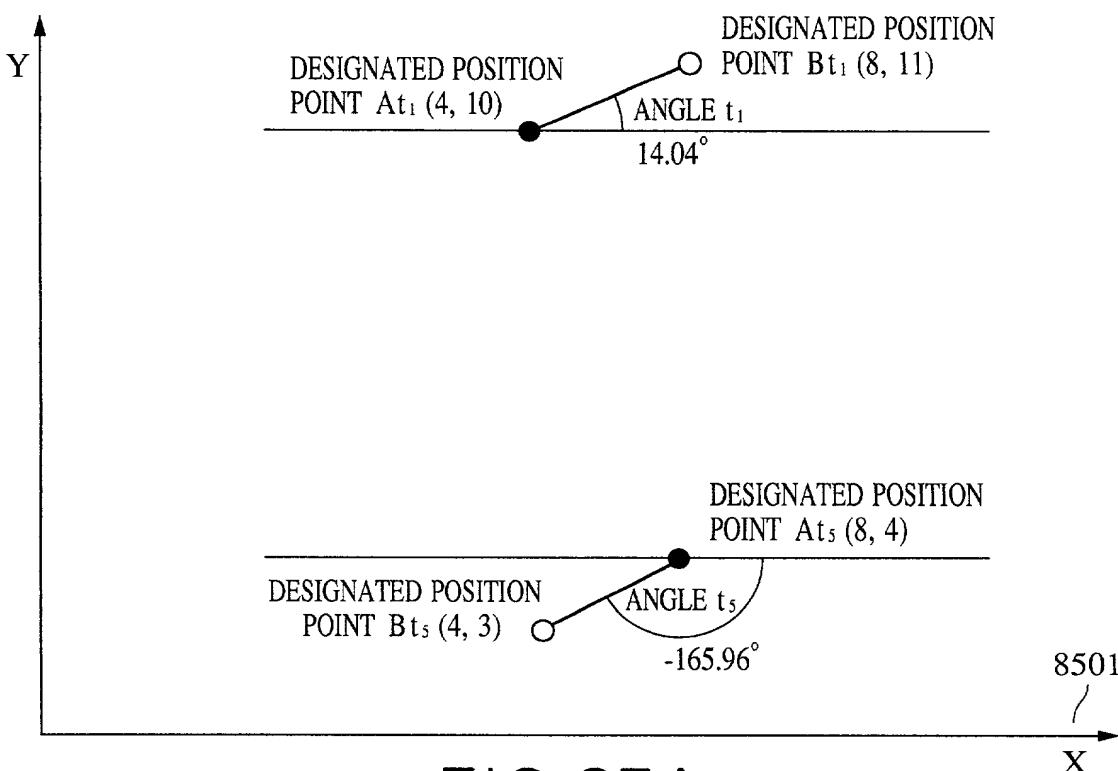


FIG. 85A

DESIGNATED POSITION  
POSITION DATA OF POINT A

	$A_x$	$A_y$
$t_1$	4.0	10.0
$t_2$	5.0	8.0
$t_3$	6.0	6.0
$t_4$	7.0	5.0
$t_5$	8.0	4.0

FIG. 85B

DESIGNATED POSITION  
POSITION DATA OF POINT B

	$B_x$	$B_y$
$t_1$	8.0	11.0
$t_2$	7.0	9.0
$t_3$	6.0	7.0
$t_4$	5.0	5.0
$t_5$	4.0	3.0

8502

FIG. 85C

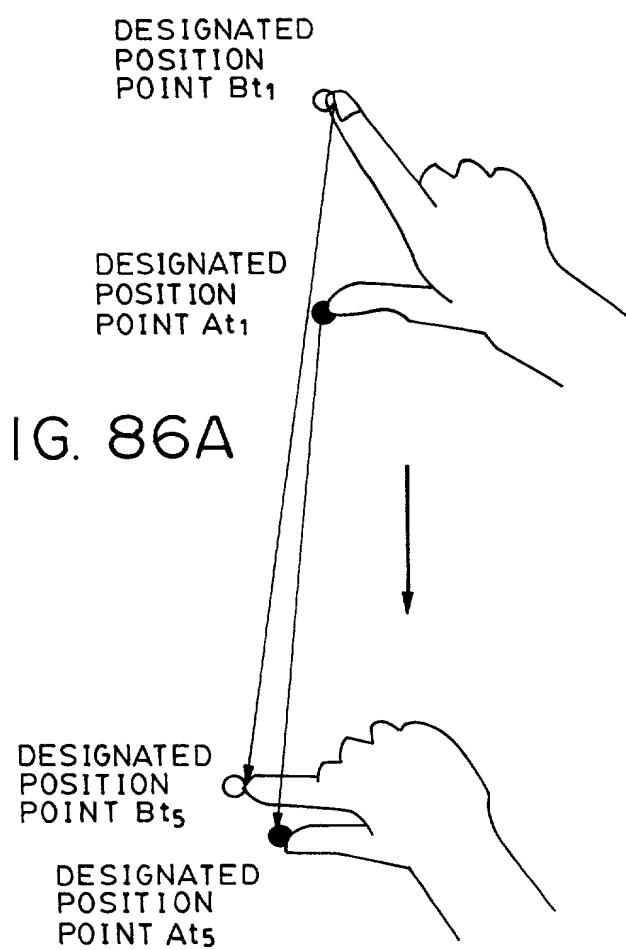
DATA OF CHANGE IN POSITIONAL RELATIONSHIP

8503

	X DIRECTION	Y DIRECTION	ANGLE OF DESIGNATED POSITIONS	CHANGE IN POSITIONAL RELATIONSHIP
$t_1$	-4.0	-1.0	14.04	0.00
$t_2$	-2.0	-1.0	26.57	-12.53
$t_3$	0.0	-1.0	90.00	-75.99
$t_4$	2.0	0.0	180.00	-165.96
$t_5$	4.0	1.0	-165.96	180.00

FIG. 85D

LATERAL INVERSION



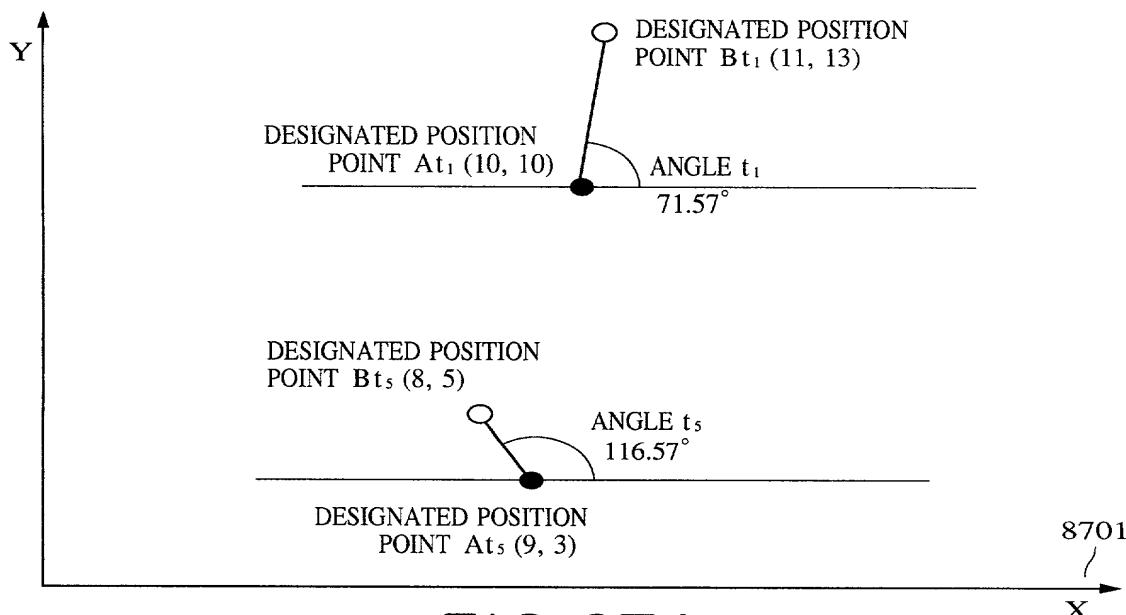


FIG. 87A

DESIGNATED POSITION  
POSITION DATA OF POINT A

	$A_x$	$A_y$
$t_1$	10.0	10.0
$t_2$	9.8	8.0
$t_3$	9.6	6.0
$t_4$	9.3	5.0
$t_5$	9.0	3.0

DESIGNATED POSITION  
POSITION DATA OF POINT B

	$B_x$	$B_y$
$t_1$	11.0	13.0
$t_2$	10.8	9.0
$t_3$	10.6	7.0
$t_4$	10.3	6.0
$t_5$	8.0	5.0

FIG. 87B

FIG. 87C

DATA OF CHANGE IN POSITIONAL RELATIONSHIP

	X DIRECTION	Y DIRECTION	ANGLE OF DESIGNATED POSITIONS	CHANGE IN POSITIONAL RELATIONSHIP
$t_1$	-1.0	-3.0	71.57	0.00
$t_2$	-1.0	-1.0	45.00	26.57
$t_3$	-1.0	-1.0	45.00	26.57
$t_4$	-1.0	-1.0	45.00	26.57
$t_5$	1.0	-2.0	116.57	45.00

8703

FIG. 87D

VERTICAL INVERSION



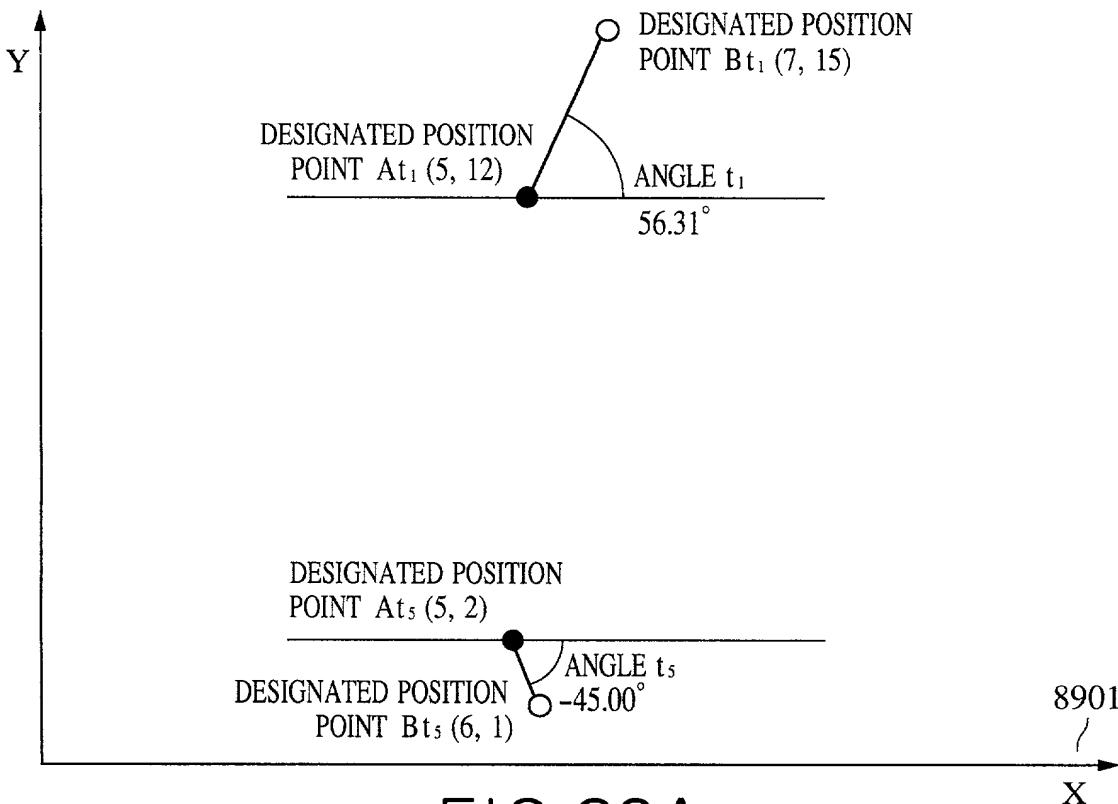


FIG. 89A

DESIGNATED POSITION  
POSITION DATA OF POINT A

	A <sub>X</sub>	A <sub>Y</sub>
t <sub>1</sub>	5.0	12.0
t <sub>2</sub>	5.0	9.0
t <sub>3</sub>	5.0	6.0
t <sub>4</sub>	5.0	3.0
t <sub>5</sub>	5.0	2.0

DESIGNATED POSITION  
POSITION DATA OF POINT B

	B <sub>X</sub>	B <sub>Y</sub>
t <sub>1</sub>	7.0	15.0
t <sub>2</sub>	6.8	11.0
t <sub>3</sub>	6.5	8.0
t <sub>4</sub>	6.2	4.0
t <sub>5</sub>	6.0	1.0

FIG. 89B

FIG. 89C

DATA OF CHANGE IN POSITIONAL RELATIONSHIP

	X DIRECTION	Y DIRECTION	ANGLE OF DESIGNATED POSITIONS	CHANGE IN POSITIONAL RELATIONSHIP
t <sub>1</sub>	-2.0	-3.0	56.31	0.00
t <sub>2</sub>	-1.8	-2.0	48.01	8.30
t <sub>3</sub>	-1.5	-2.0	53.13	3.18
t <sub>4</sub>	-1.2	-1.0	39.81	16.50
t <sub>5</sub>	-1.0	1.0	-45.00	101.31

8903

FIG. 89D

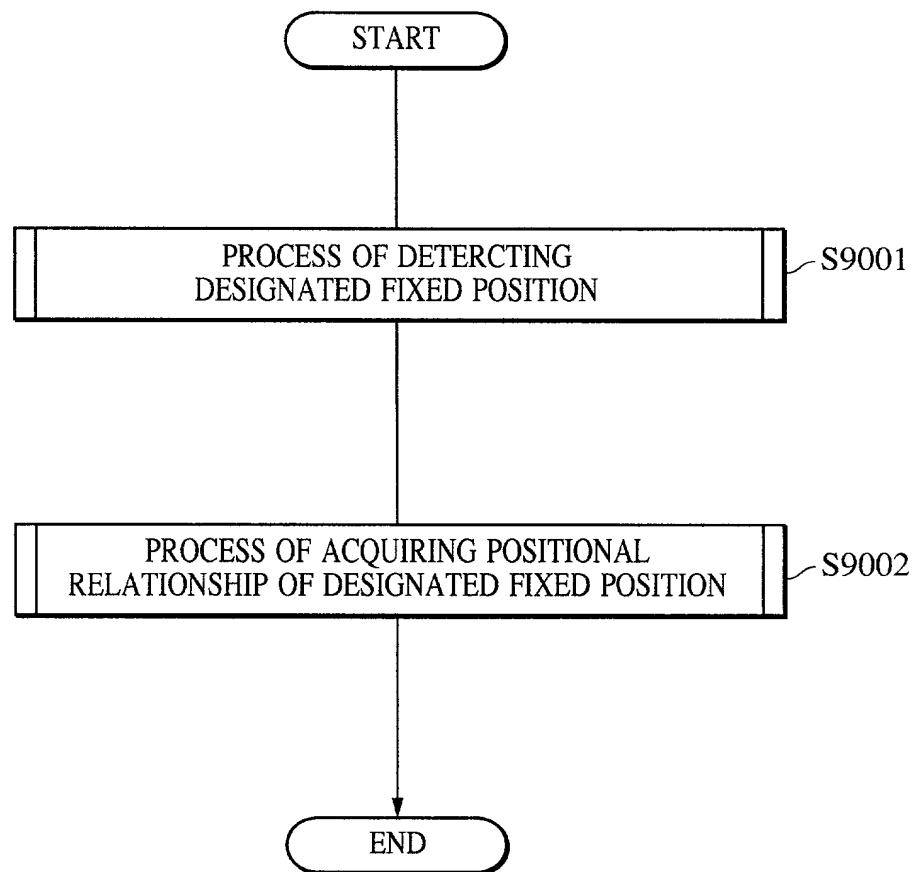


FIG. 90

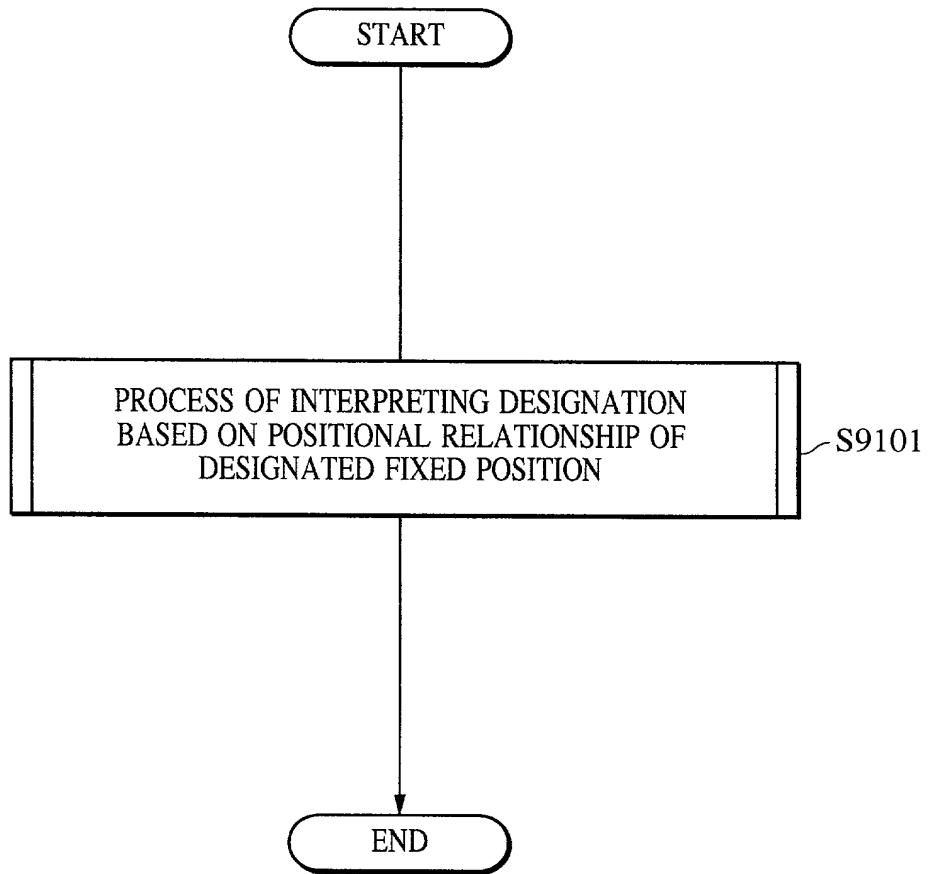


FIG. 91

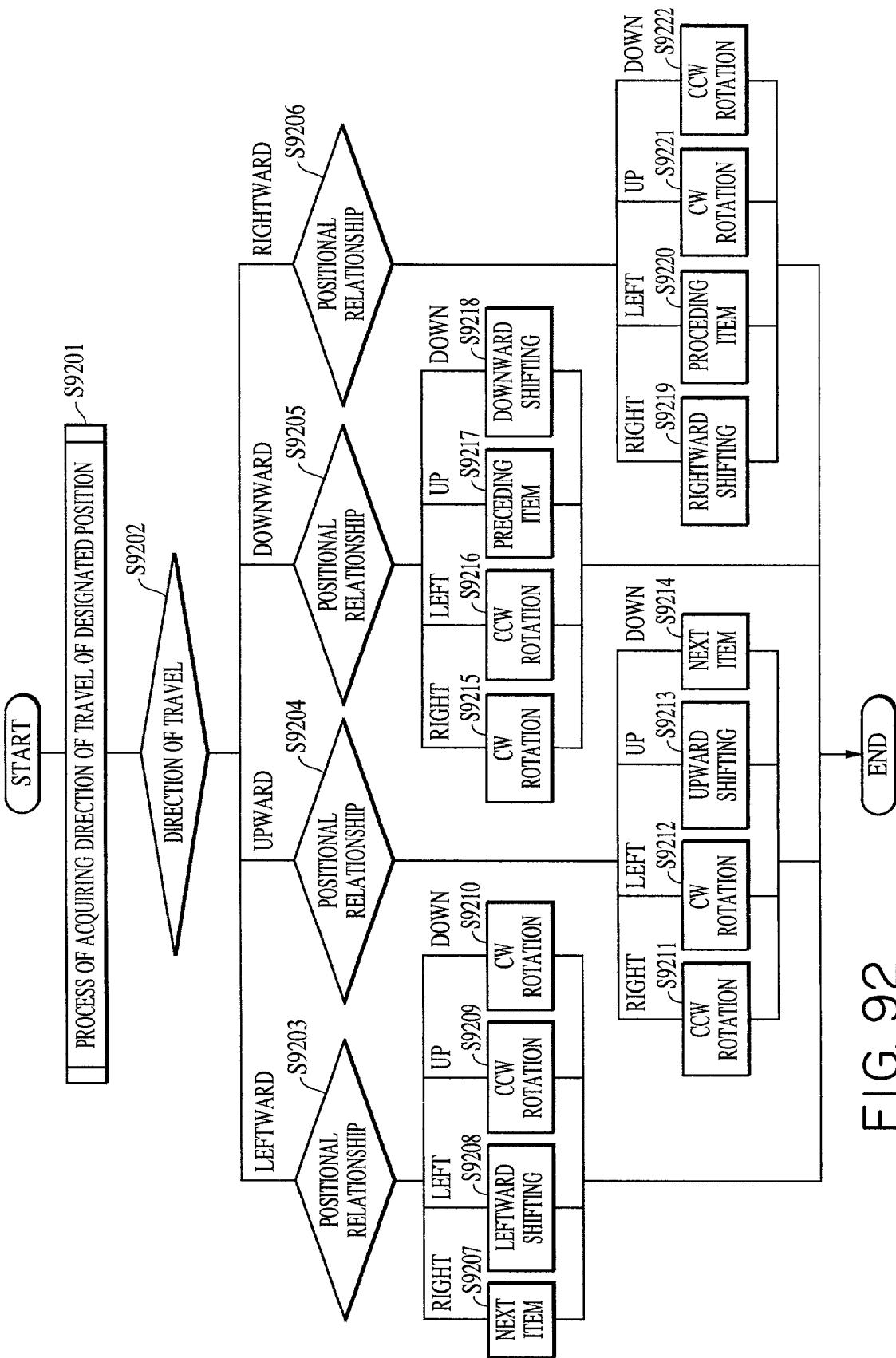


FIG. 92

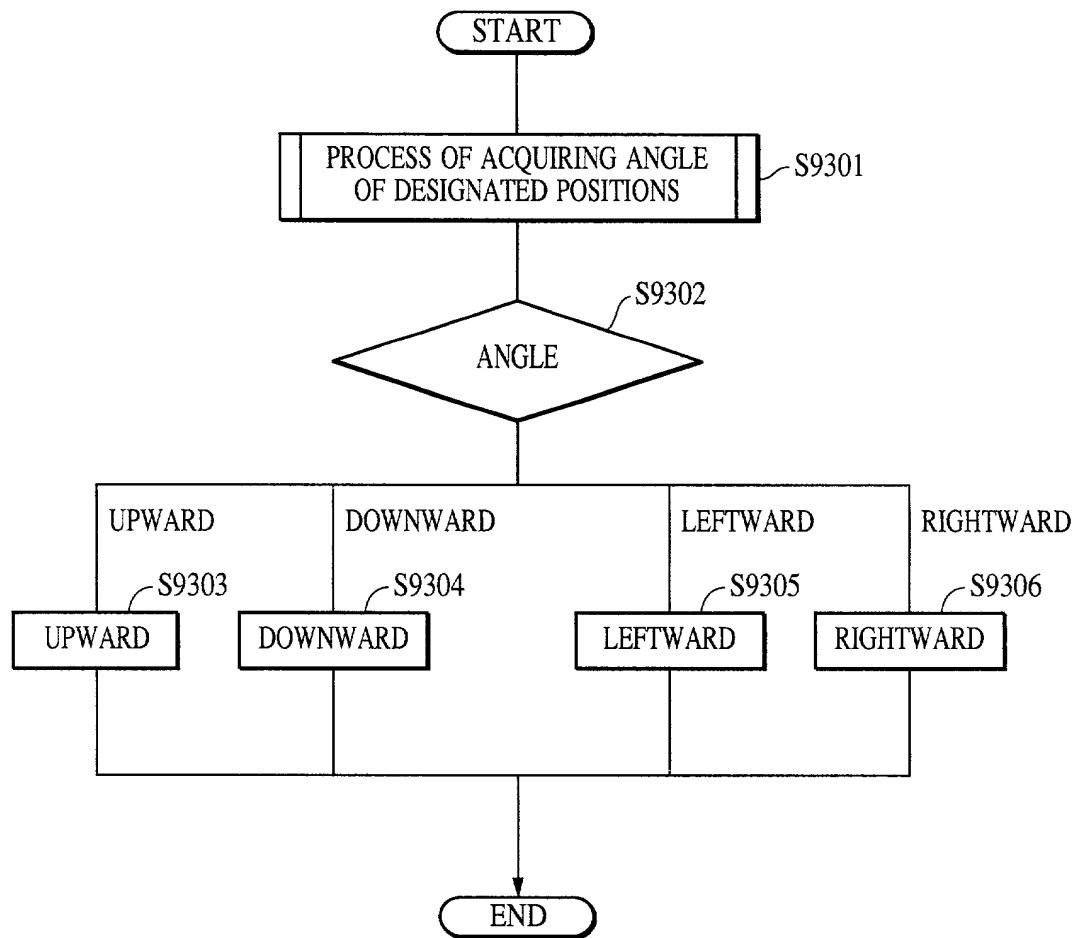


FIG. 93

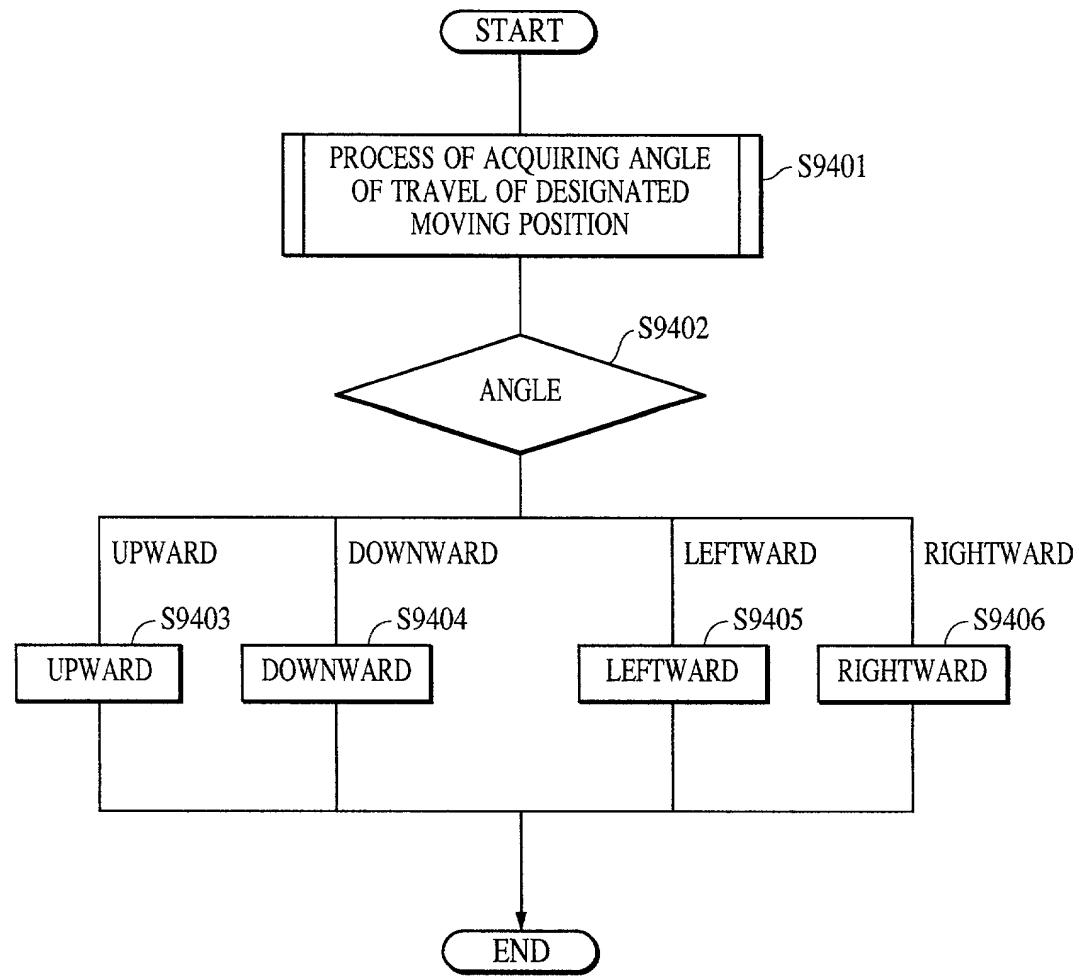


FIG. 94

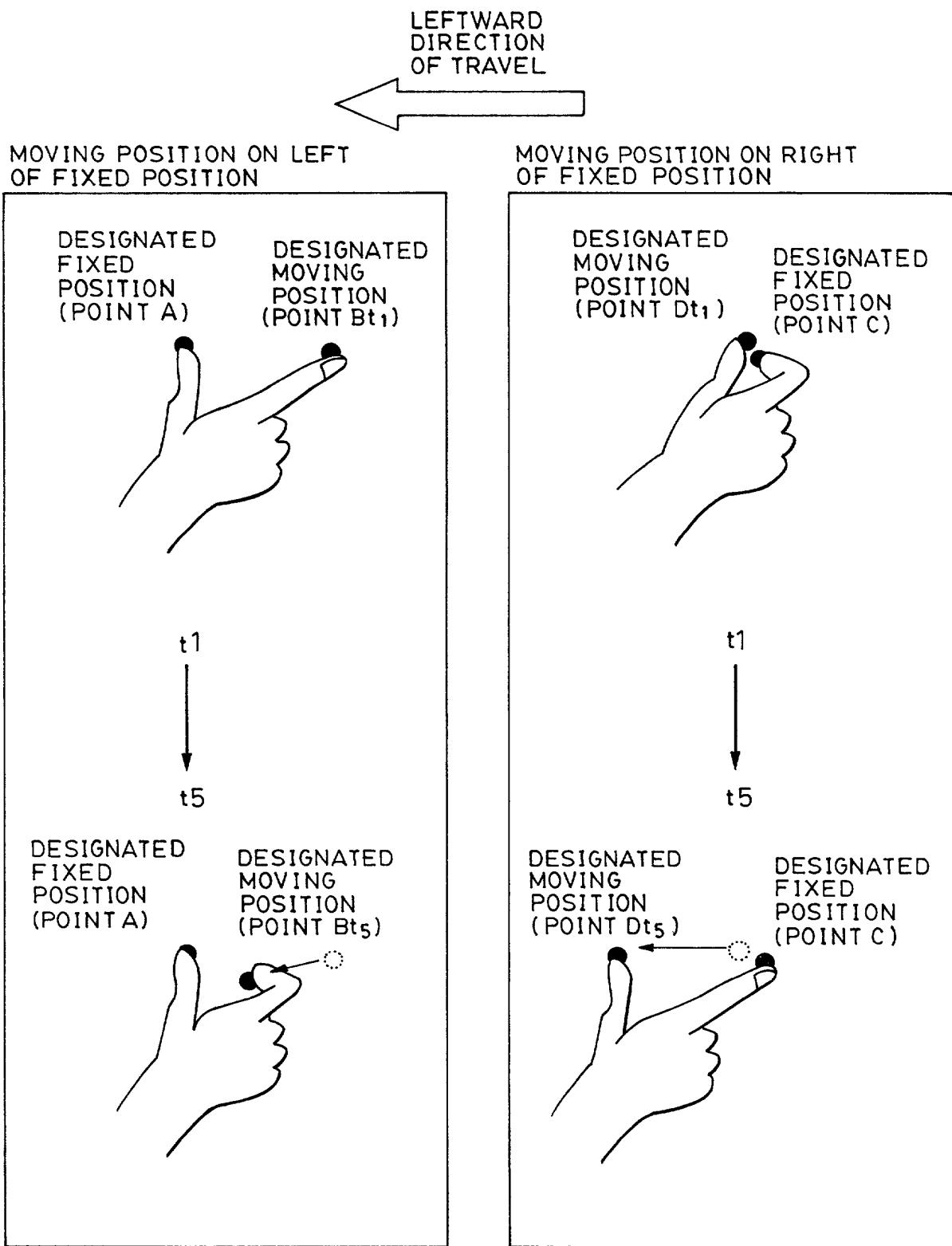


FIG. 95A

FIG. 95B

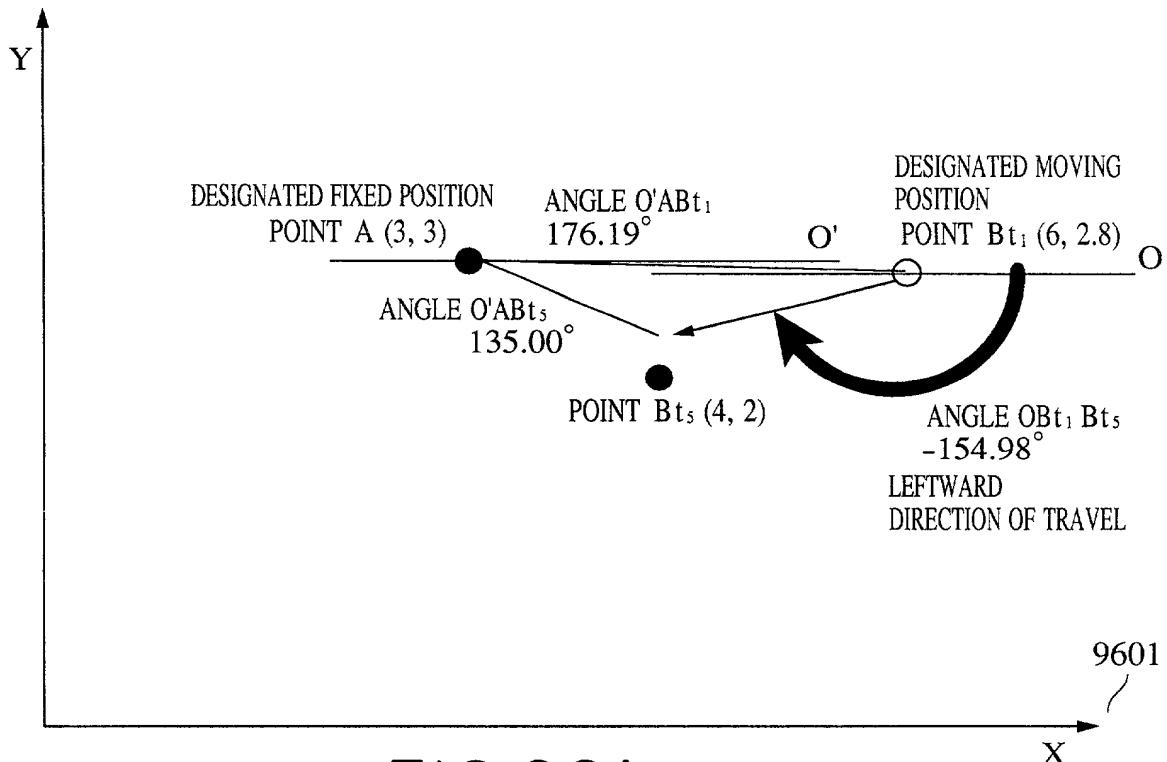


FIG. 96A

DESIGNATED FIXED POSITION  
POSITION DATA OF POINT A

	A <sub>X</sub>	A <sub>Y</sub>
t <sub>1</sub>	3	3
t <sub>2</sub>	3	3
t <sub>3</sub>	3	3
t <sub>4</sub>	3	3
t <sub>5</sub>	3	3

DESIGNATED MOVING POSITION  
POSITION DATA OF POINT B

	B <sub>X</sub>	B <sub>Y</sub>
t <sub>1</sub>	6.0	3.0
t <sub>2</sub>	5.3	2.3
t <sub>3</sub>	4.7	1.7
t <sub>4</sub>	4.3	1.2
t <sub>5</sub>	4.0	2.0

FIG. 96B

FIG. 96C

DATA OF TRAVEL OF DESIGNATED MOVING POSITION

	TRAVEL OF POINT A	TRAVEL OF POINT B	ANGLE OF DESIGNATED POSITIONS	DIRECTION OF TRAVEL
t <sub>1</sub>	0.000	0.000	176.19	-158.20
t <sub>2</sub>	0.000	0.000	163.30	-154.98
t <sub>3</sub>	0.000	1.729	142.05	-154.98
t <sub>4</sub>	0.000	2.310	126.53	-154.98
t <sub>5</sub>	0.000	2.154	135.00	-154.98

9603

FIG. 96D

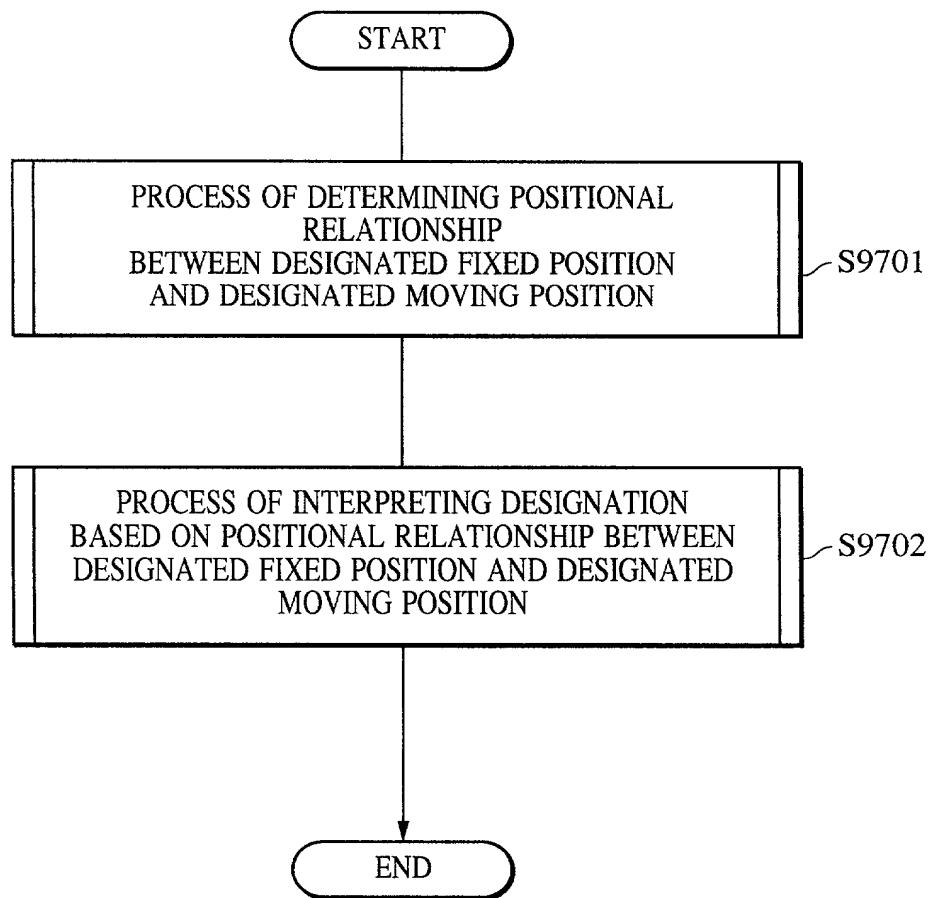


FIG. 97

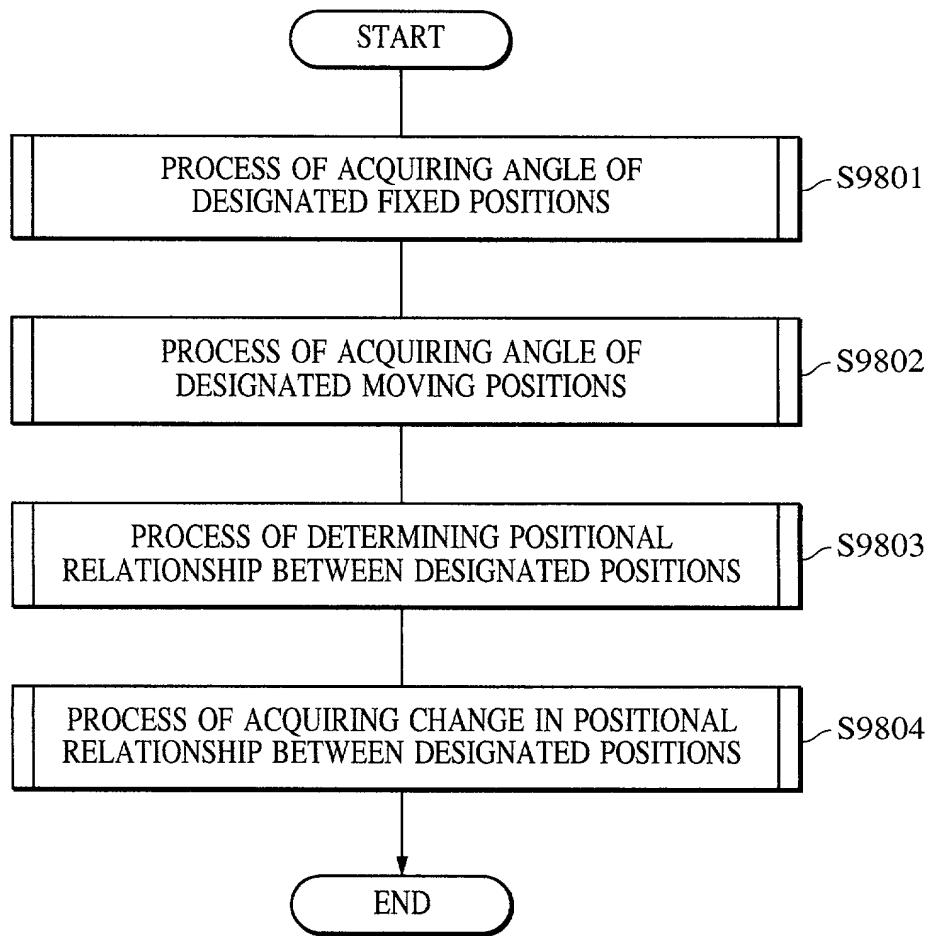


FIG. 98

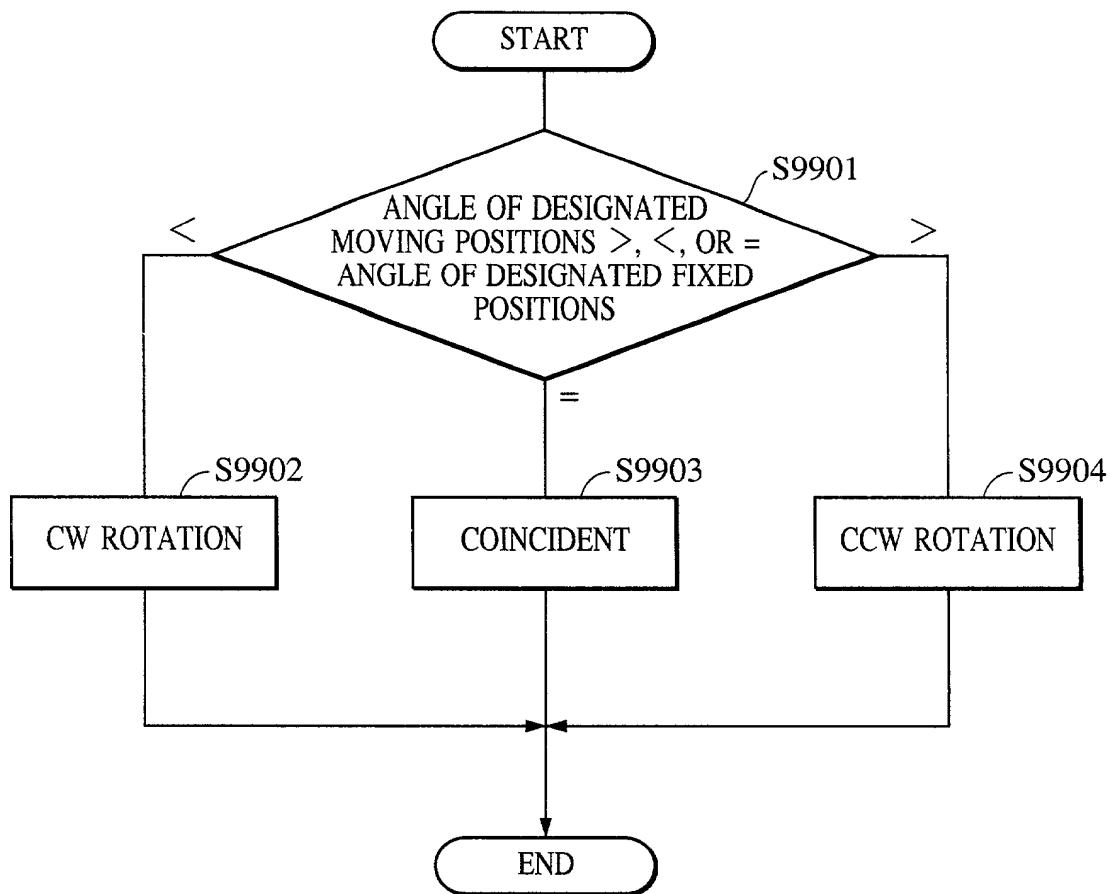


FIG. 99

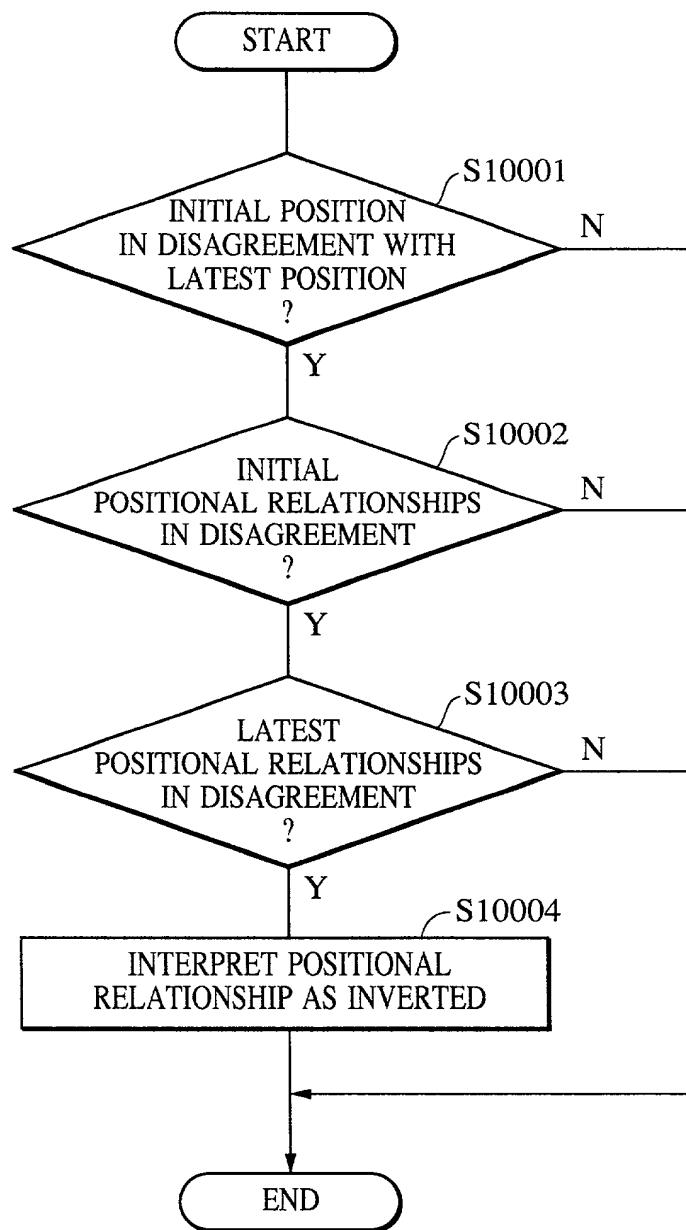


FIG. 100

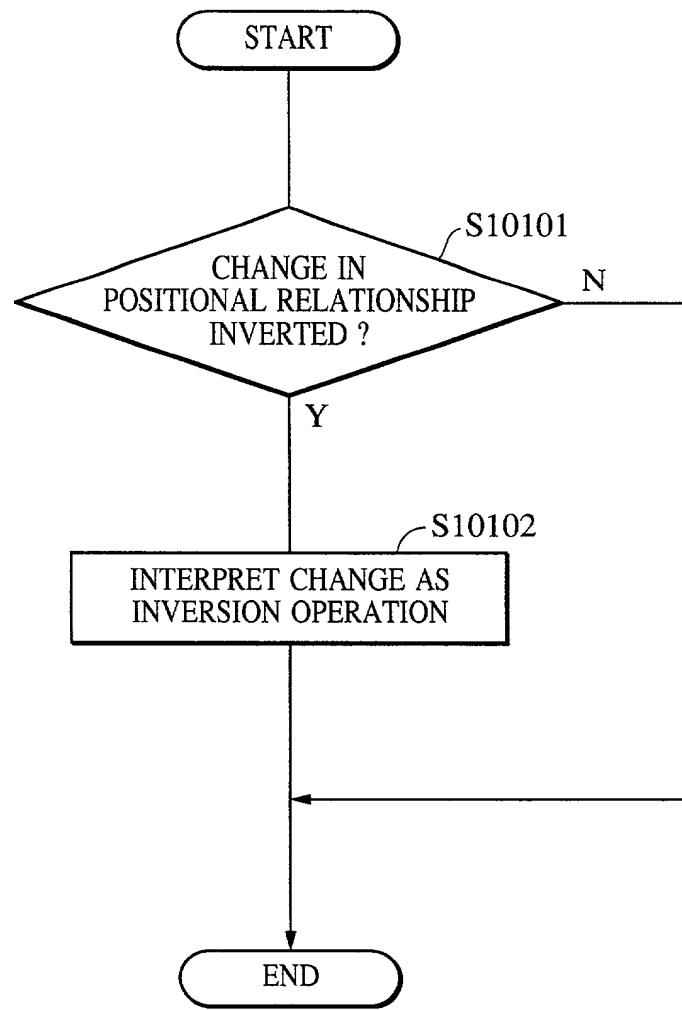
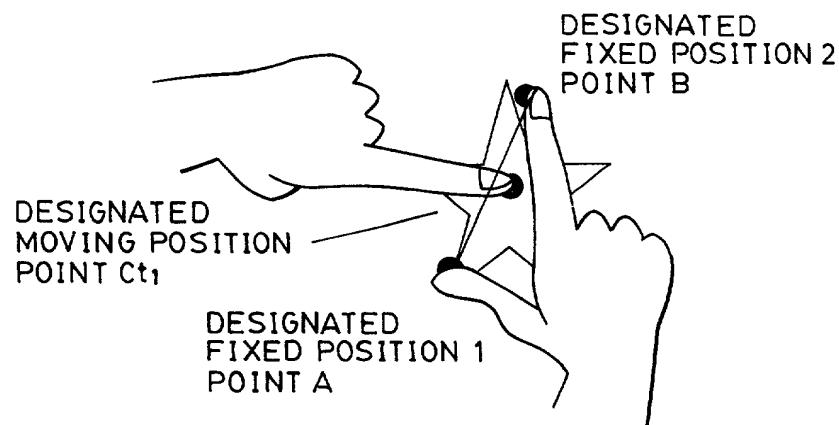


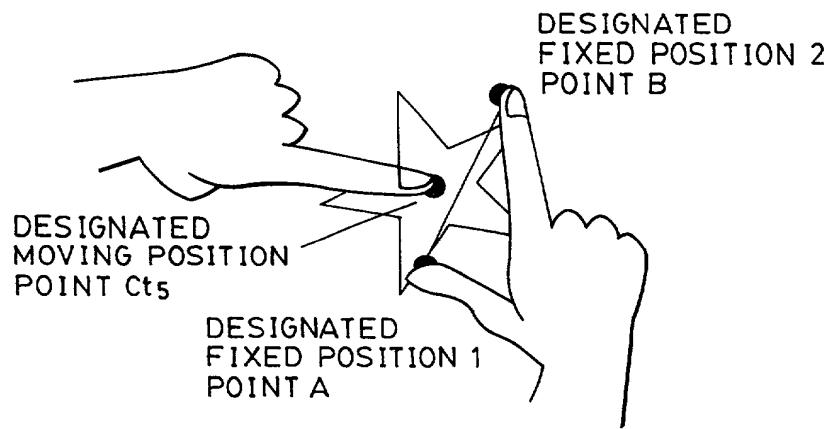
FIG. 101

SYMMETRICAL INVERSION



$t_1$

FIG. 102A



$t_5$

FIG. 102B

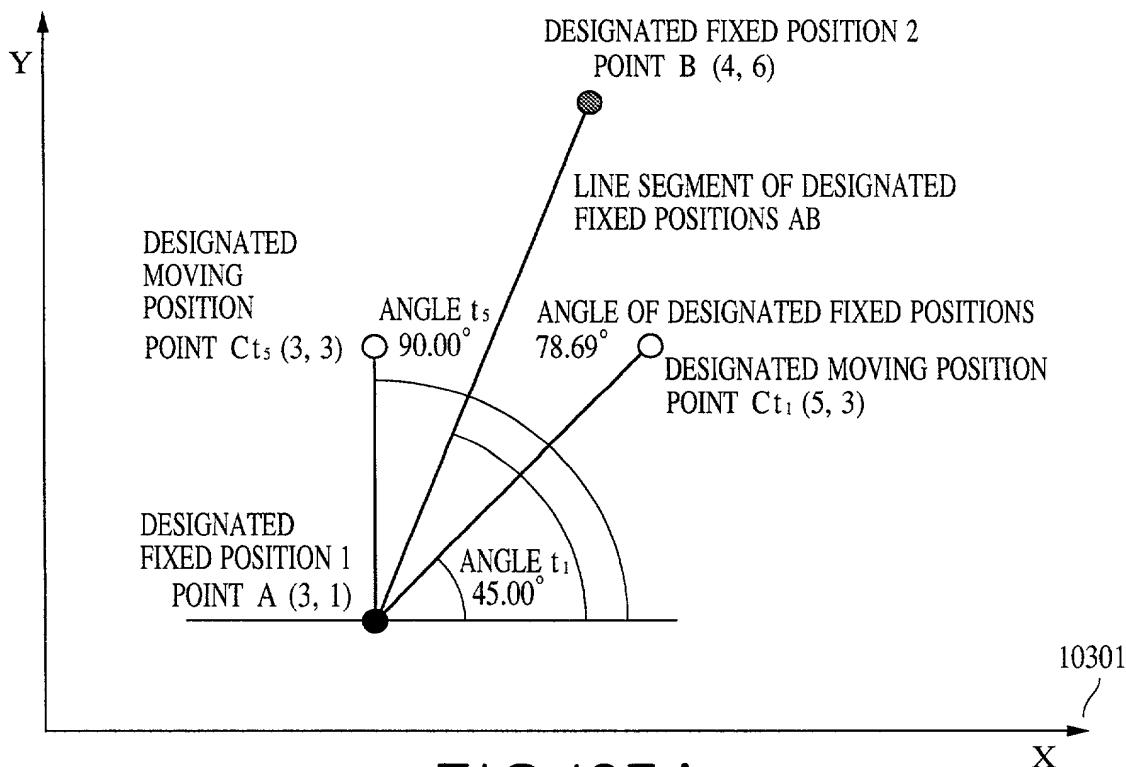


FIG. 103A

DESIGNATED FIXED POSITION  
POSITION DATA OF POINT A

	A <sub>X</sub>	A <sub>Y</sub>
t <sub>1</sub>	3.0	1.0
t <sub>2</sub>	3.0	1.0
t <sub>3</sub>	3.0	1.0
t <sub>4</sub>	3.0	1.0
t <sub>5</sub>	3.0	1.0

DESIGNATED FIXED POSITION  
POSITION DATA OF POINT B

	B <sub>X</sub>	B <sub>Y</sub>
t <sub>1</sub>	4.0	6.0
t <sub>2</sub>	4.0	6.0
t <sub>3</sub>	4.0	6.0
t <sub>4</sub>	4.0	6.0
t <sub>5</sub>	4.0	6.0

DESIGNATED MOVING POSITION  
POSITION DATA OF POINT C

	C <sub>X</sub>	C <sub>Y</sub>
t <sub>1</sub>	5.0	3.0
t <sub>2</sub>	4.5	3.0
t <sub>3</sub>	4.0	3.0
t <sub>4</sub>	3.5	3.0
t <sub>5</sub>	3.0	3.0

FIG. 103B

FIG. 103C

FIG. 103D

POSITIONAL RELATIONSHIP DATA OF TWO DESIGNATED  
FIXED POSITIONS AND DESIGNATED MOVING POSITION

10303

	ANGLE OF FIXED POSITIONS	ANGLE OF MOVING POSITIONS
t <sub>1</sub>	78.69	45.00
t <sub>2</sub>	78.69	53.13
t <sub>3</sub>	78.69	63.43
t <sub>4</sub>	78.69	75.96
t <sub>5</sub>	78.69	90.00

FIG. 103E

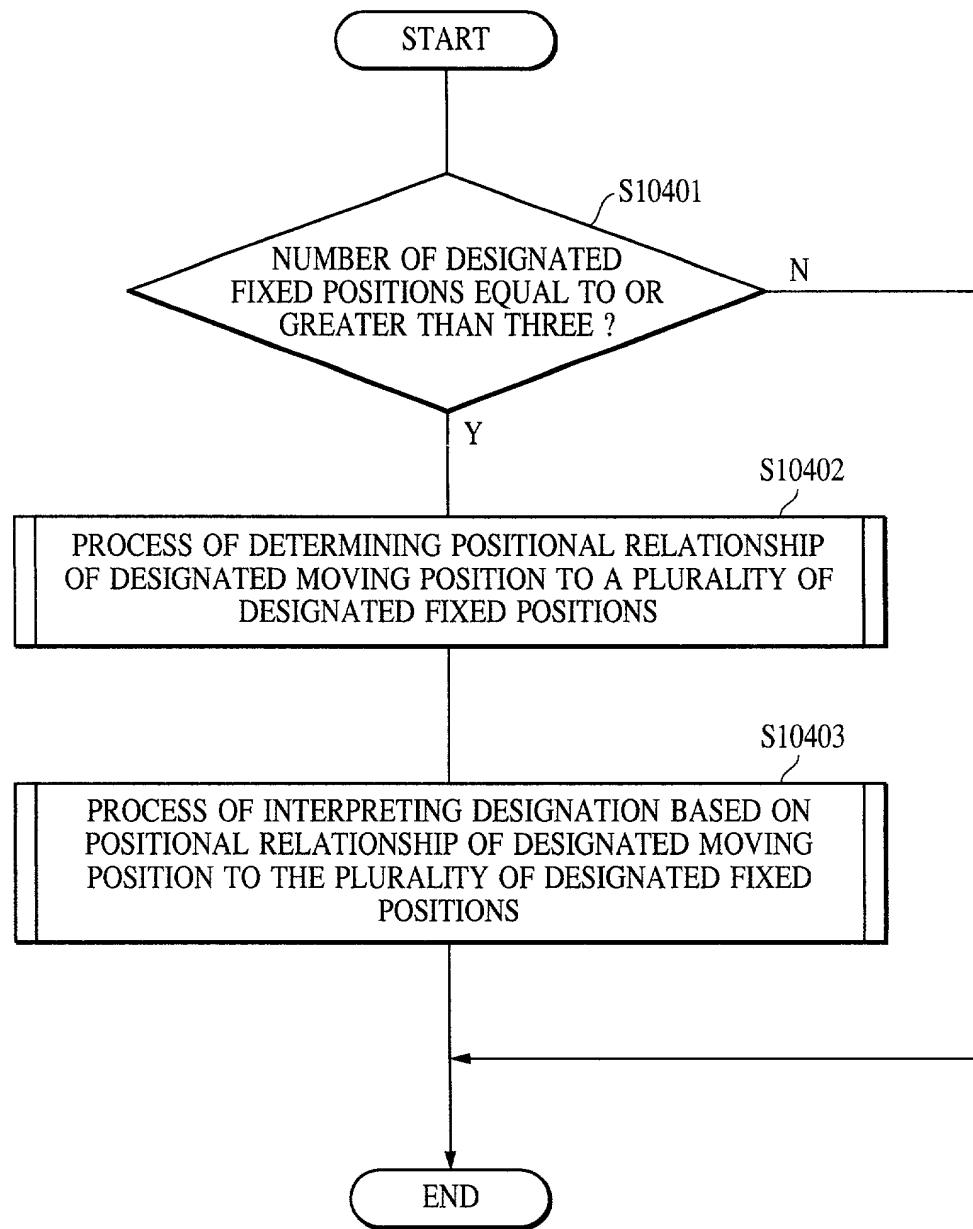


FIG. 104

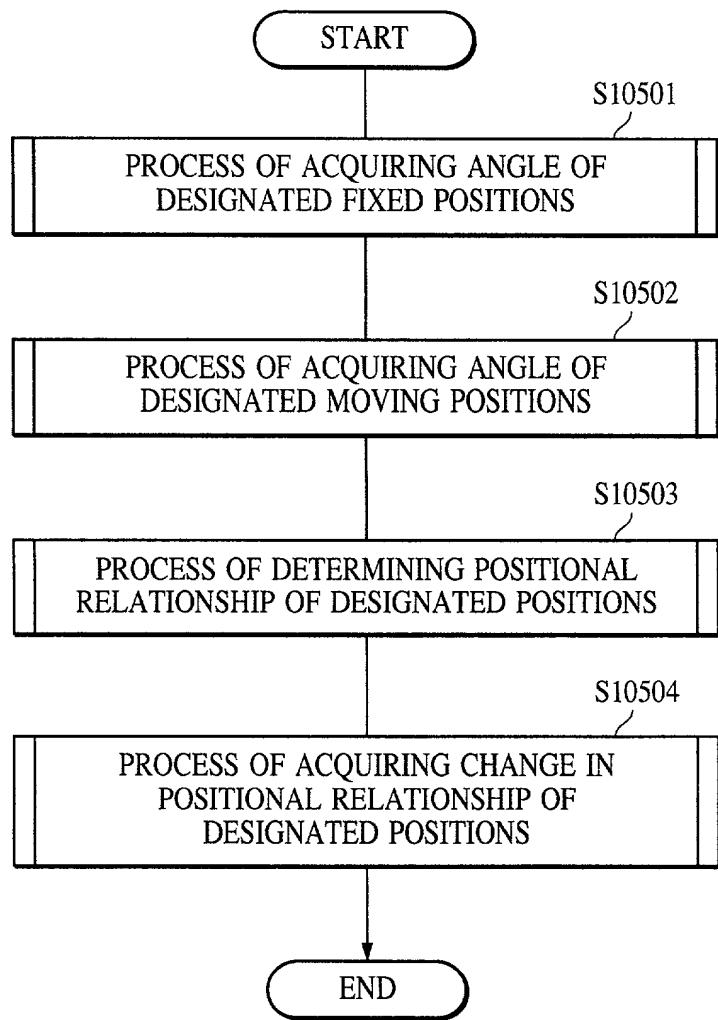


FIG. 105

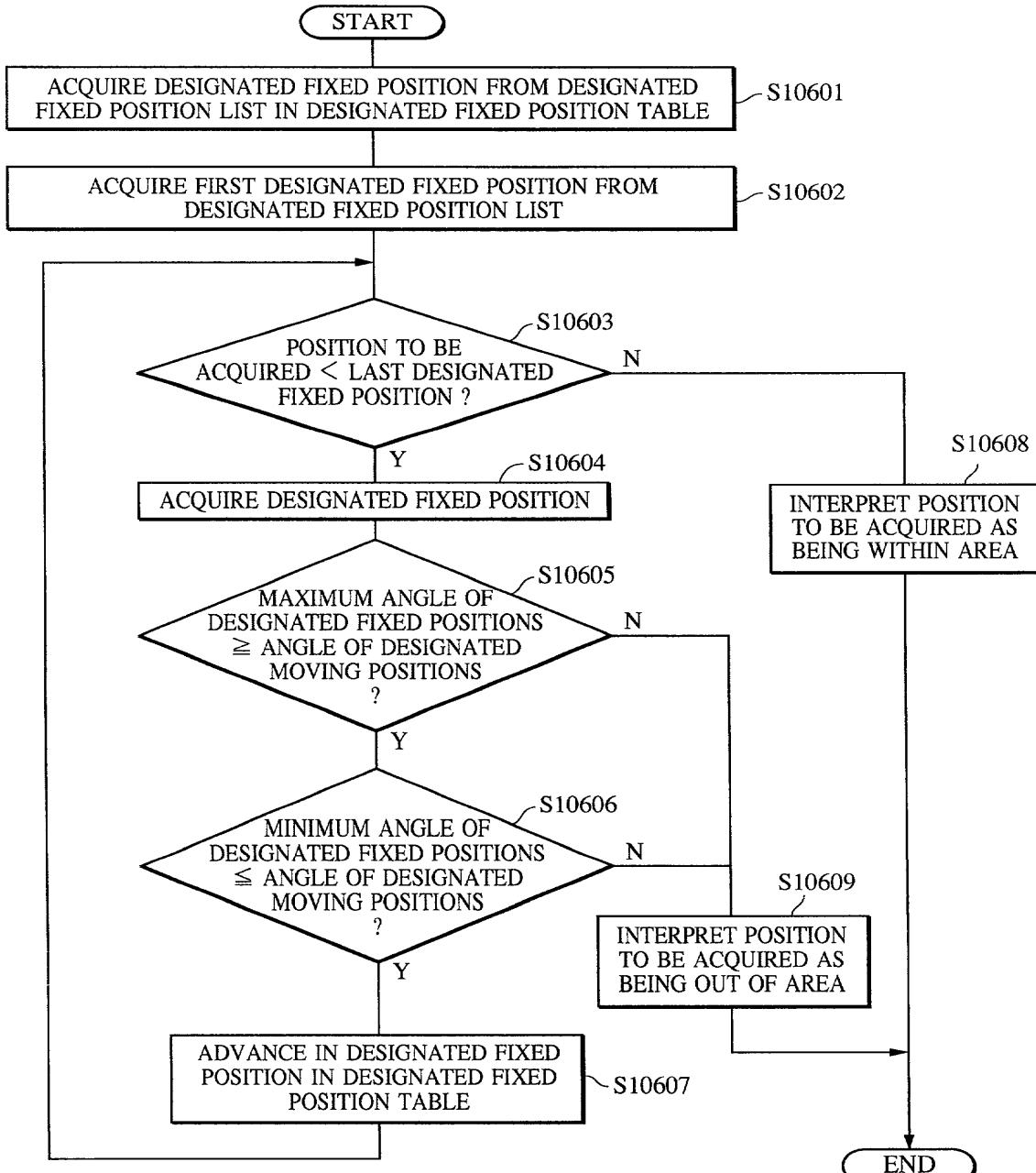


FIG. 106

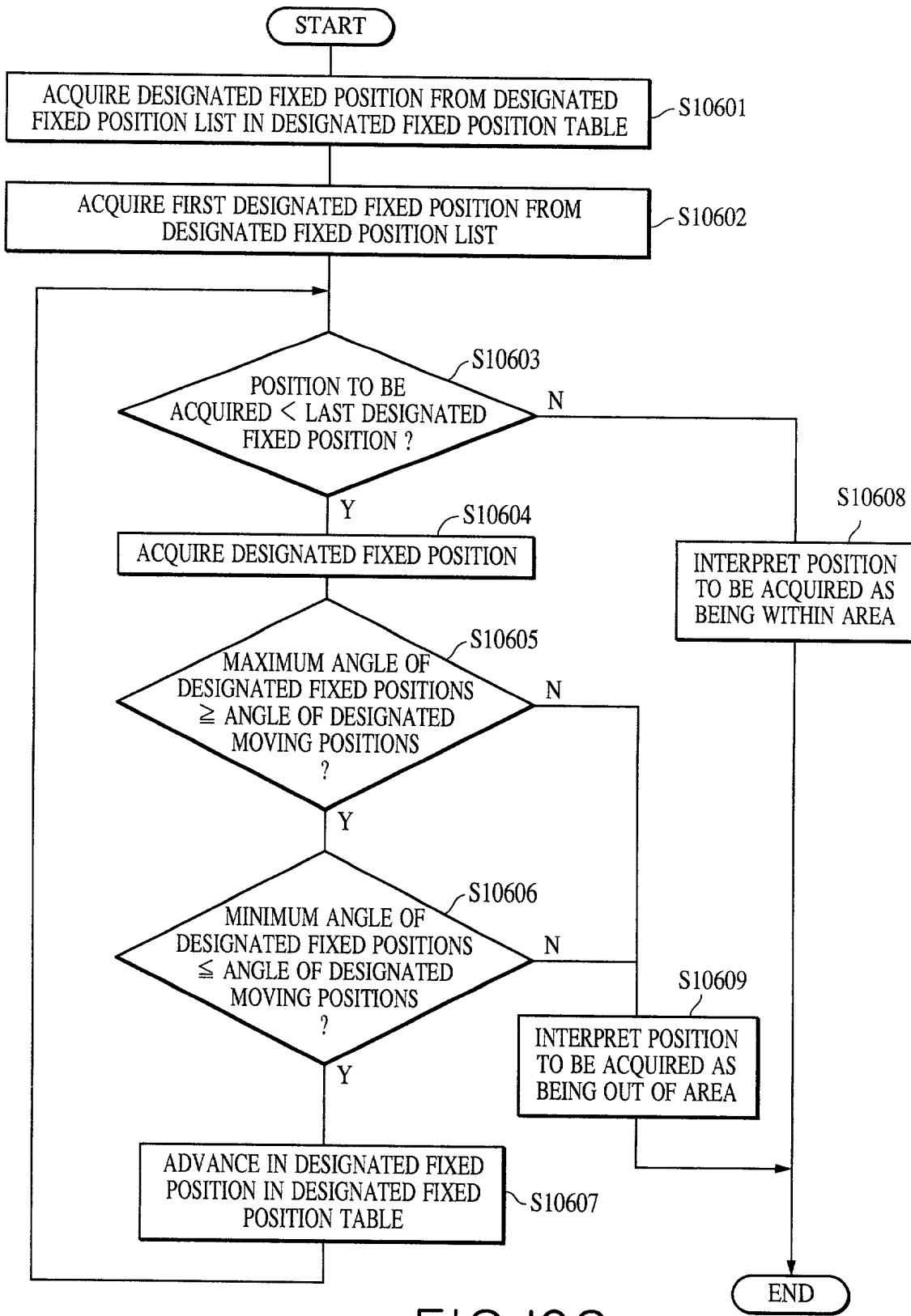


FIG. 106

WITHIN AREA

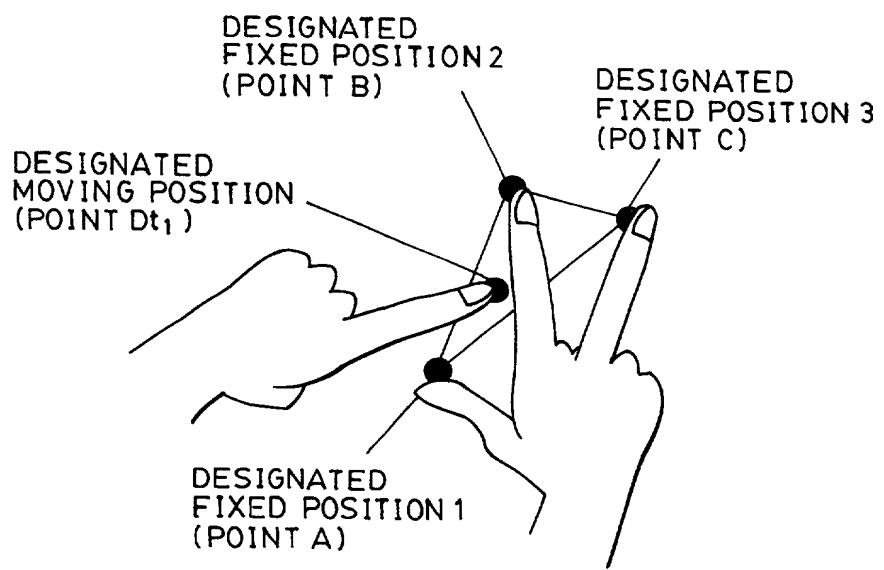


FIG. 107

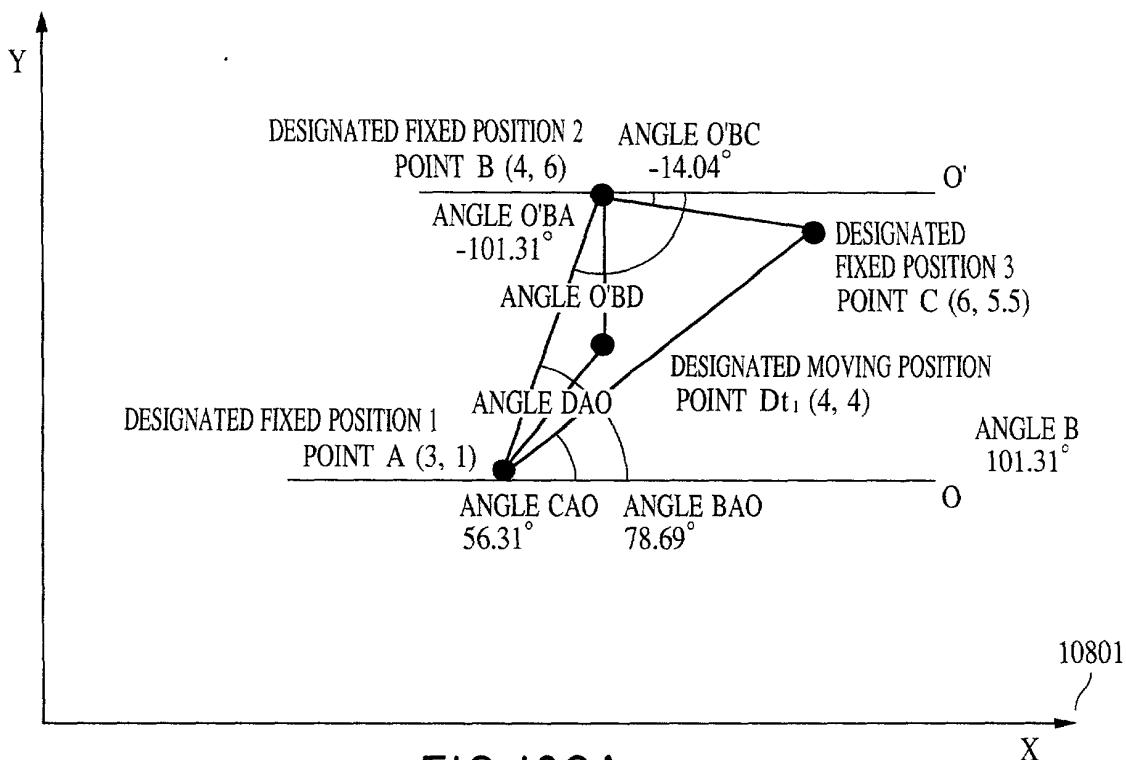


FIG. 108A

DESIGNATED FIXED POSITION  
POSITION DATA OF POINT A

	A <sub>X</sub>	A <sub>Y</sub>
t <sub>1</sub>	3.0	1.0

DESIGNATED FIXED POSITION  
POSITION DATA OF POINT B

	B <sub>X</sub>	B <sub>Y</sub>
t <sub>1</sub>	4.0	6.0

DESIGNATED FIXED POSITION  
POSITION DATA OF POINT C

	C <sub>X</sub>	C <sub>Y</sub>
t <sub>1</sub>	6.0	5.5

DESIGNATED MOVING POSITION  
POSITION DATA OF POINT D

	D <sub>X</sub>	D <sub>Y</sub>
t <sub>1</sub>	4.0	4.0

10802

FIG. 108B

FIG. 108C

FIG. 108D

FIG. 108E

DATA OF CHANGE IN POSITIONAL RELATIONSHIP OF  
DESIGNATED FIXED POSITIONS

10803

	ANGLE BAO	ANGLE CAO	ANGLE DAO	ANGLE O'BA	ANGLE O'BC	ANGLE O'BD
t <sub>1</sub>	78.69	56.31	71.57	-101.31	-14.04	-90.00

FIG. 108F

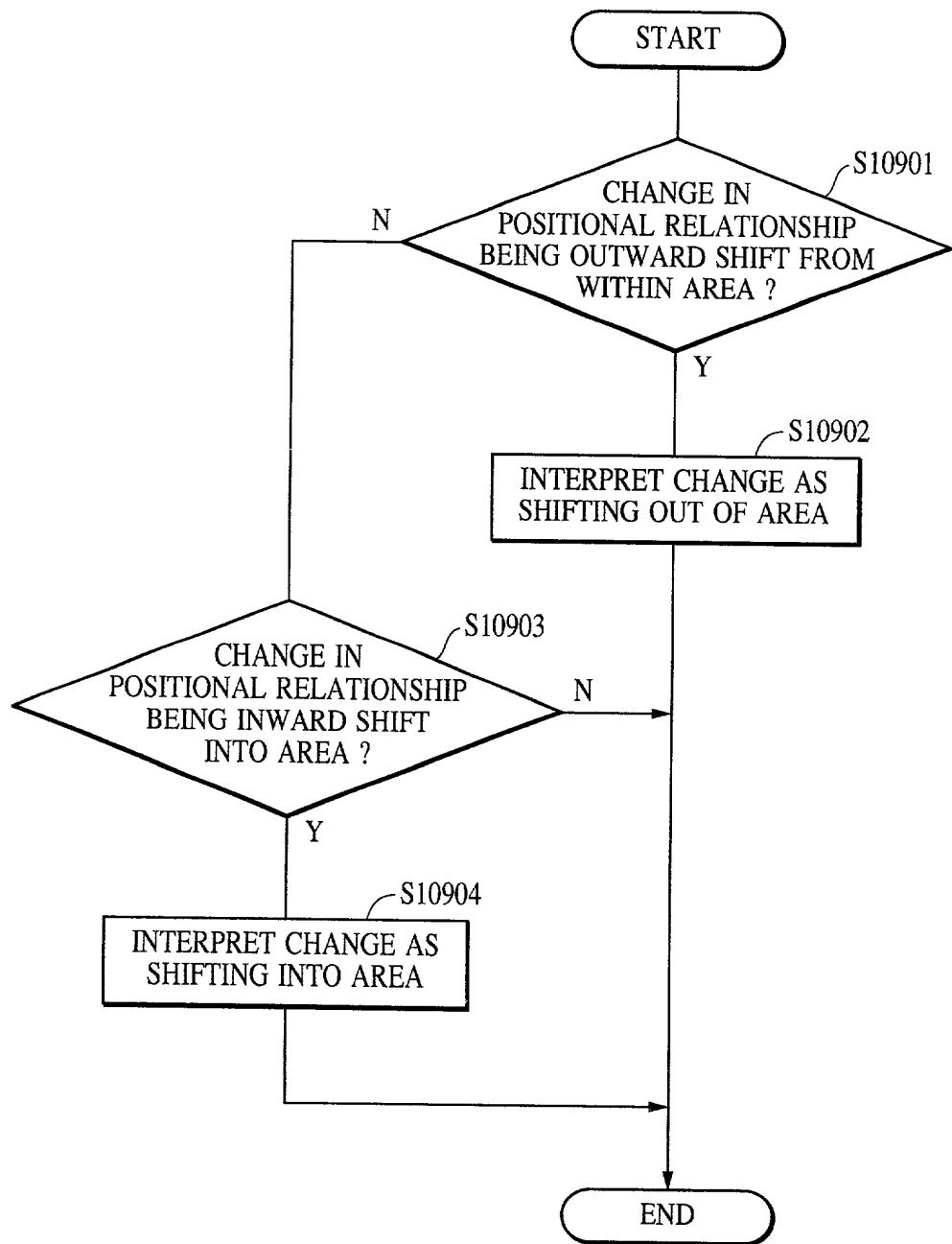


FIG. 109

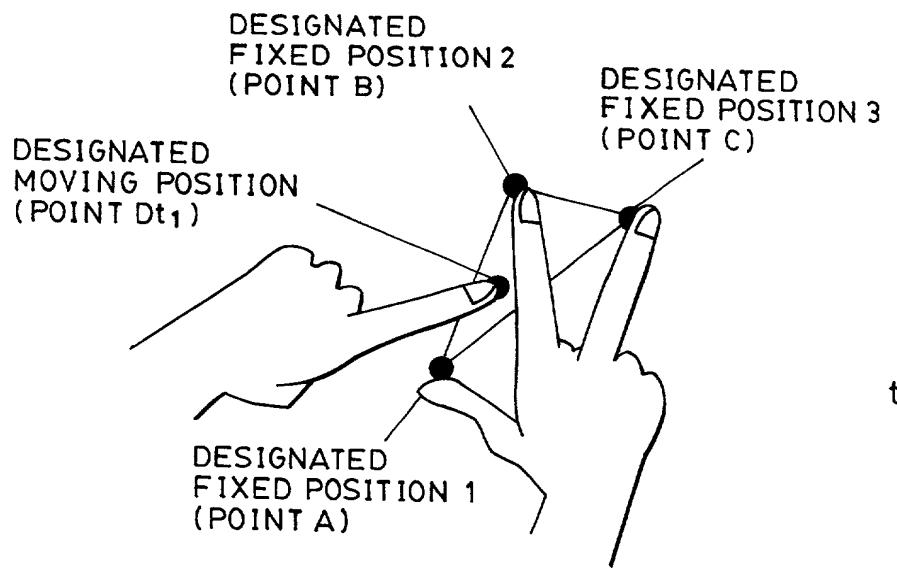


FIG. 110A

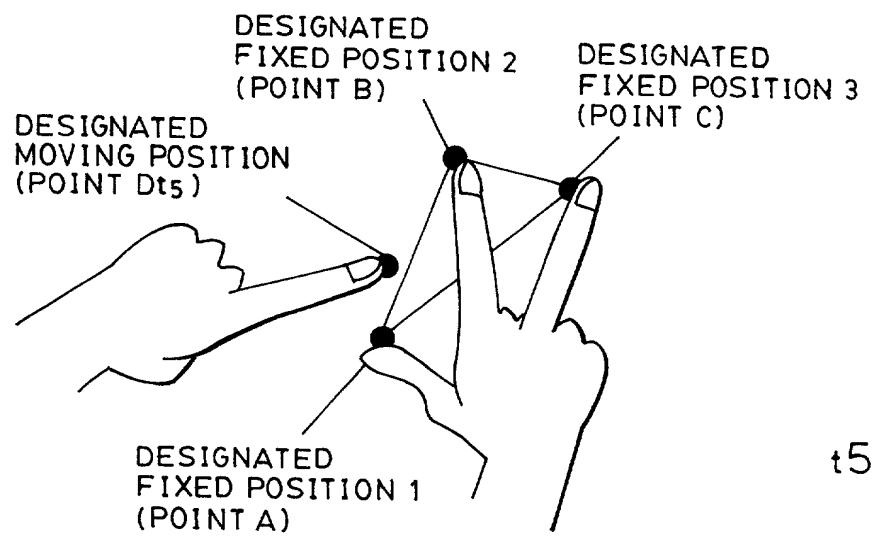


FIG. 110B

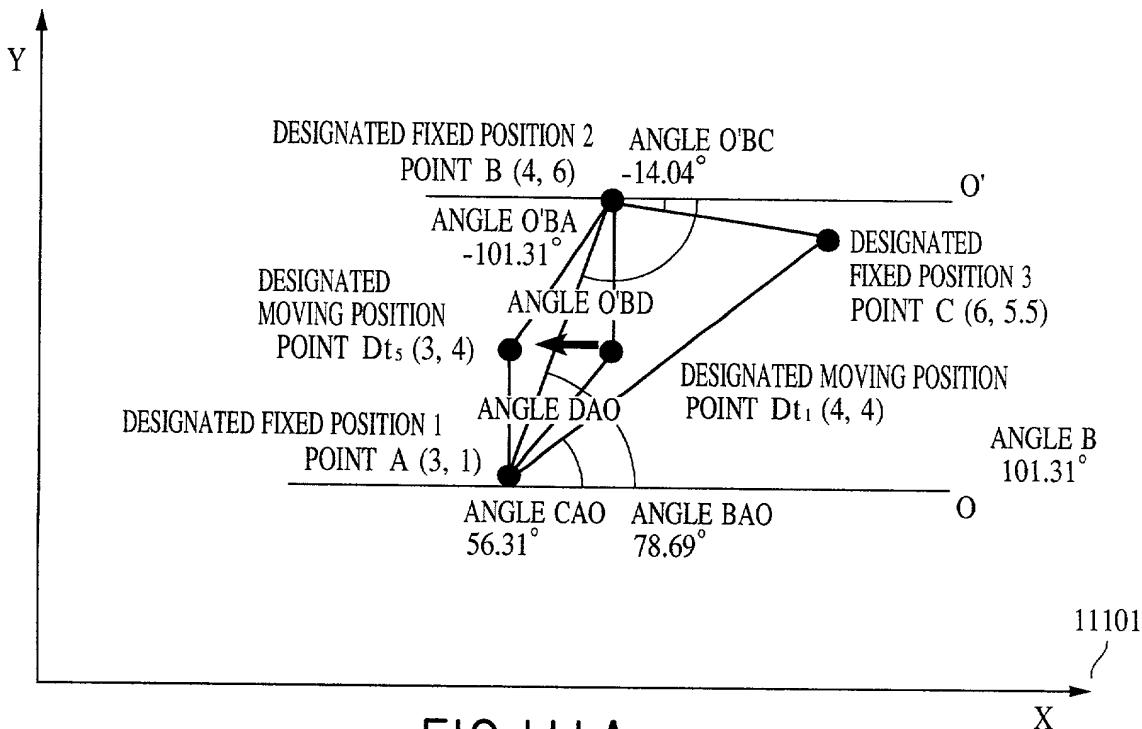


FIG. IIIA

DESIGNATED FIXED POSITION  
POSITION DATA OF POINT A

	A <sub>X</sub>	A <sub>Y</sub>
t <sub>1</sub>	3.0	1.0
t <sub>2</sub>	3.0	1.0
t <sub>3</sub>	3.0	1.0
t <sub>4</sub>	3.0	1.0
t <sub>5</sub>	3.0	1.0

DESIGNATED FIXED POSITION  
POSITION DATA OF POINT B

	B <sub>X</sub>	B <sub>Y</sub>
t <sub>1</sub>	4.0	6.0
t <sub>2</sub>	4.0	6.0
t <sub>3</sub>	4.0	6.0
t <sub>4</sub>	4.0	6.0
t <sub>5</sub>	4.0	6.0

DESIGNATED FIXED POSITION  
POSITION DATA OF POINT C

	C <sub>X</sub>	C <sub>Y</sub>
t <sub>1</sub>	6.0	5.5
t <sub>2</sub>	6.0	5.5
t <sub>3</sub>	6.0	5.5
t <sub>4</sub>	6.0	5.5
t <sub>5</sub>	6.0	5.5

DESIGNATED MOVING POSITION  
POSITION DATA OF POINT D

	D <sub>X</sub>	D <sub>Y</sub>
t <sub>1</sub>	4.0	4.0
t <sub>2</sub>	3.8	4.0
t <sub>3</sub>	3.6	4.0
t <sub>4</sub>	3.3	4.0
t <sub>5</sub>	3.0	4.0

11102

FIG. IIIB

FIG. IIIC

FIG. IIID

FIG. IIIE

DATA OF CHANGE IN POSITIONAL RELATIONSHIP OF DESIGNATED FIXED POSITIONS

11103

	ANGLE BAO	ANGLE CAO	ANGLE DAO	ANGLE O'BA	ANGLE O'BC	ANGLE O'BD
t <sub>1</sub>	78.69	56.31	71.57	-101.31	-14.04	-90.00
t <sub>2</sub>	78.69	56.31	57.07	-101.31	-14.04	-95.71
t <sub>3</sub>	78.69	56.31	78.69	-101.31	-14.04	-101.31
t <sub>4</sub>	78.69	56.31	84.29	-101.31	-14.04	-109.29
t <sub>5</sub>	78.69	56.31	90.00	-101.31	-14.04	-116.57

FIG. IIIF

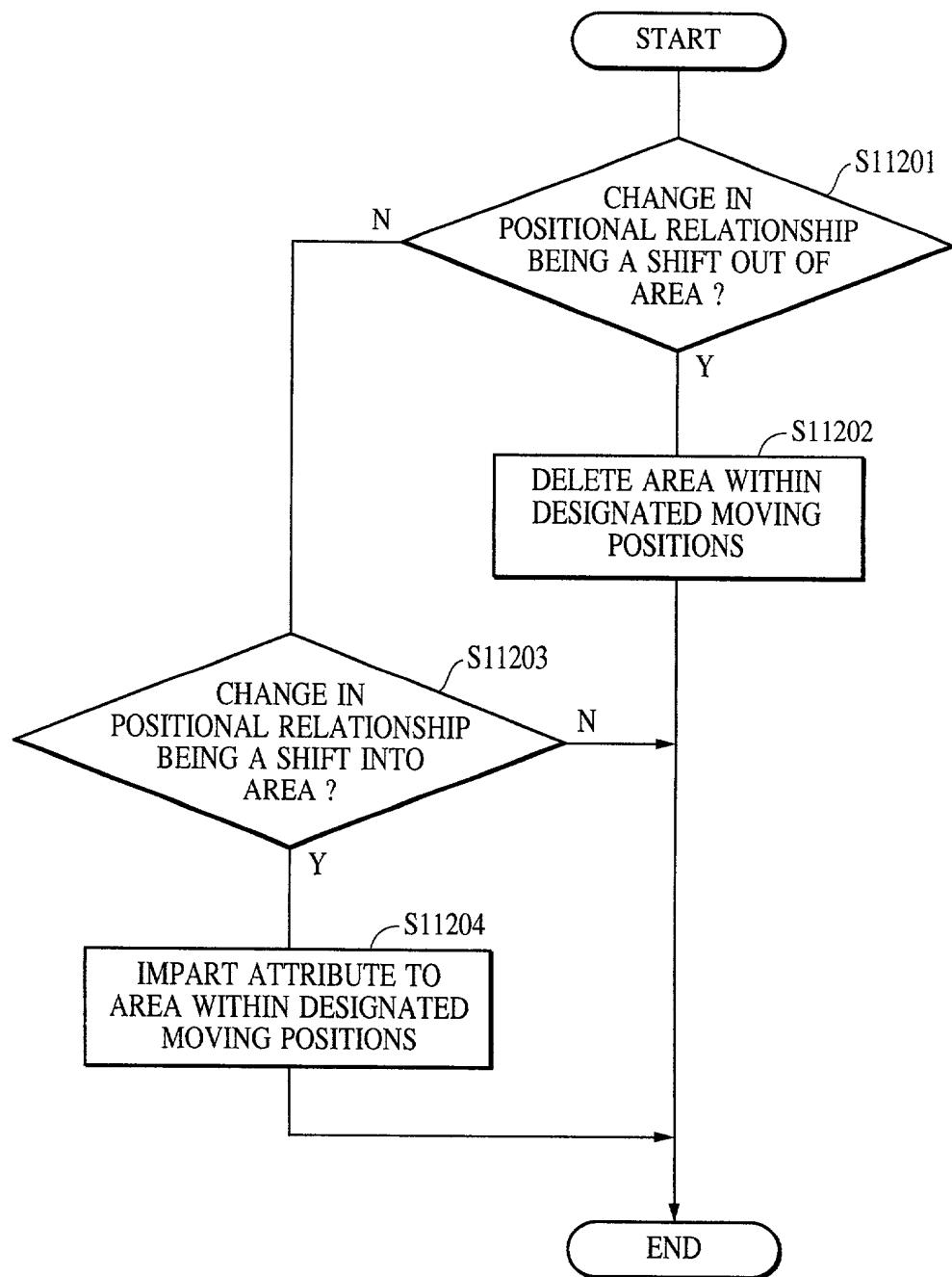


FIG. 112

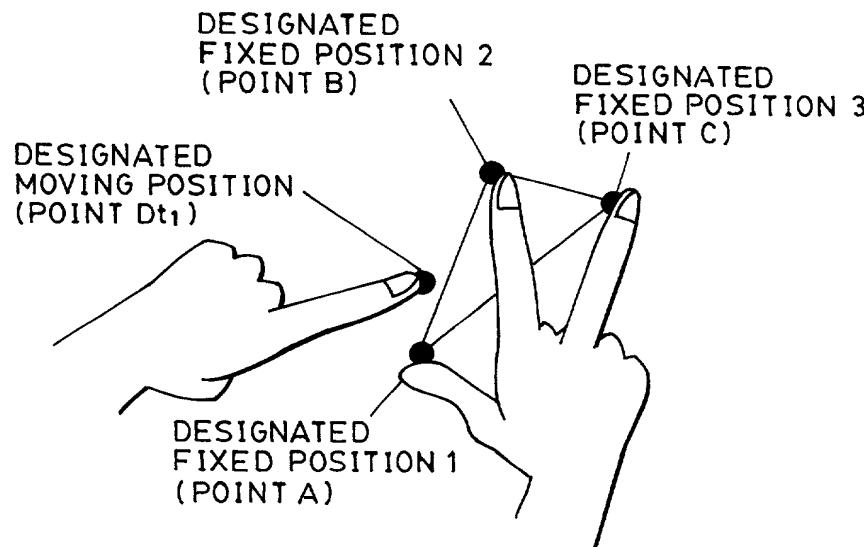


FIG. 113A

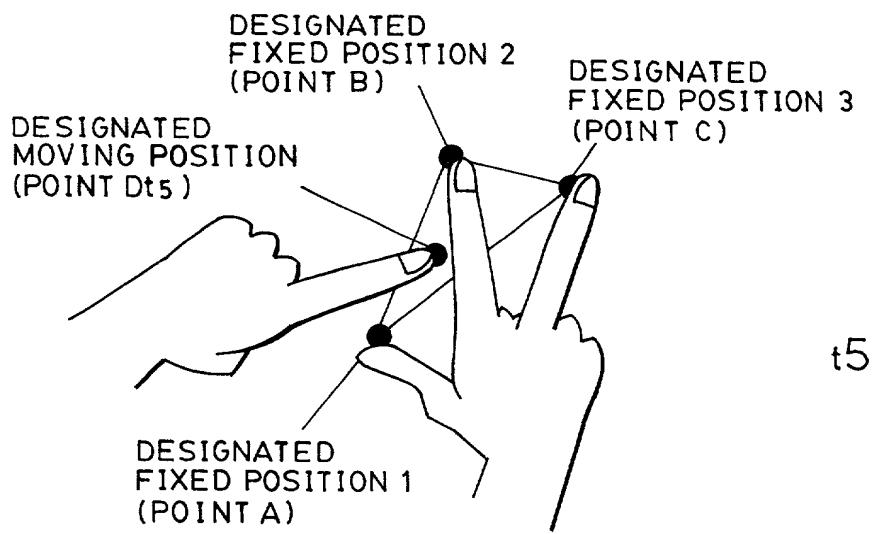


FIG. 113B

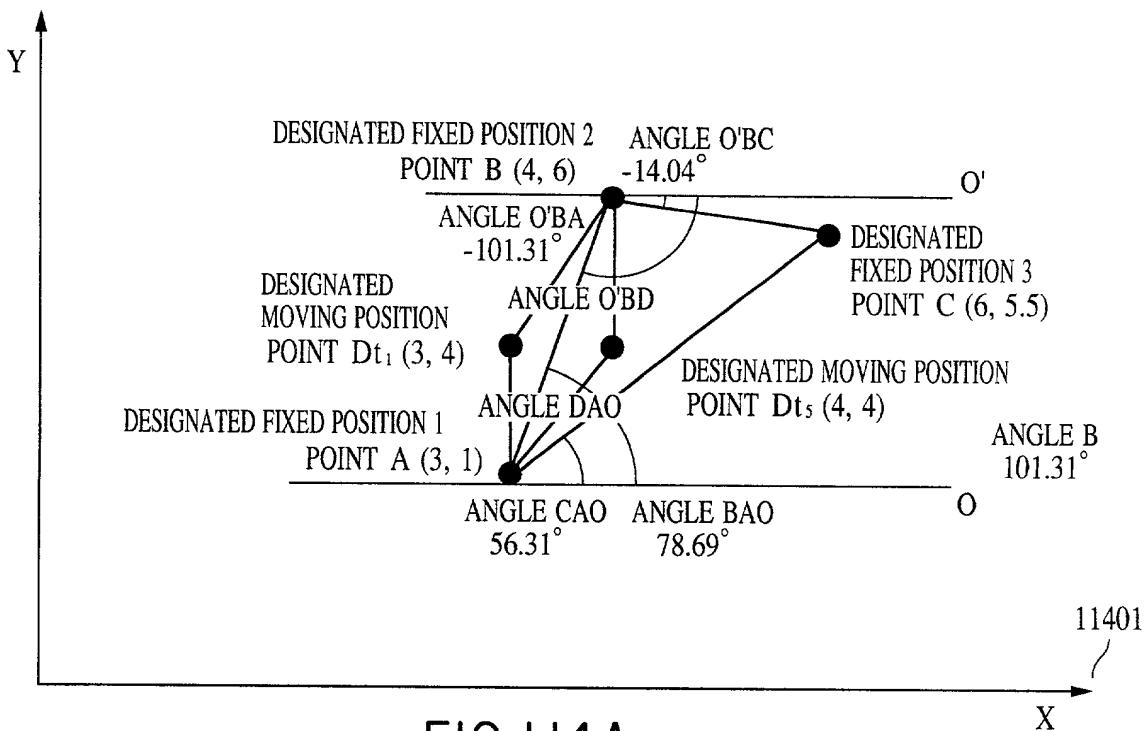


FIG. 114A

DESIGNATED FIXED POSITION  
POSITION DATA OF POINT A

	A <sub>X</sub>	A <sub>Y</sub>
t <sub>1</sub>	3.0	1.0
t <sub>2</sub>	3.0	1.0
t <sub>3</sub>	3.0	1.0
t <sub>4</sub>	3.0	1.0
t <sub>5</sub>	3.0	1.0

DESIGNATED FIXED POSITION  
POSITION DATA OF POINT B

	B <sub>X</sub>	B <sub>Y</sub>
t <sub>1</sub>	4.0	6.0
t <sub>2</sub>	4.0	6.0
t <sub>3</sub>	4.0	6.0
t <sub>4</sub>	4.0	6.0
t <sub>5</sub>	4.0	6.0

DESIGNATED FIXED POSITION  
POSITION DATA OF POINT C

	C <sub>X</sub>	C <sub>Y</sub>
t <sub>1</sub>	6.0	5.5
t <sub>2</sub>	6.0	5.5
t <sub>3</sub>	6.0	5.5
t <sub>4</sub>	6.0	5.5
t <sub>5</sub>	6.0	5.5

DESIGNATED MOVING POSITION  
POSITION DATA OF POINT D

	D <sub>X</sub>	D <sub>Y</sub>
t <sub>1</sub>	3.0	4.0
t <sub>2</sub>	3.3	4.0
t <sub>3</sub>	3.6	4.0
t <sub>4</sub>	3.8	4.0
t <sub>5</sub>	4.0	4.0

11402

FIG. 114B

FIG. 114C

FIG. 114D

FIG. 114E

DATA OF CHANGE IN POSITIONAL RELATIONSHIP

	ANGLE BAO	ANGLE CAO	ANGLE DAO	ANGLE O'BA	ANGLE O'BC	ANGLE O'BD
t <sub>1</sub>	78.69	56.31	90.00	-101.31	-14.04	-116.57
t <sub>2</sub>	78.69	56.31	84.29	-101.31	-14.04	-109.29
t <sub>3</sub>	78.69	56.31	78.69	-101.31	-14.04	-101.31
t <sub>4</sub>	78.69	56.31	75.07	-101.31	-14.04	-95.71
t <sub>5</sub>	78.69	56.31	71.57	-101.31	-14.04	-90.00

11403

FIG. 114F

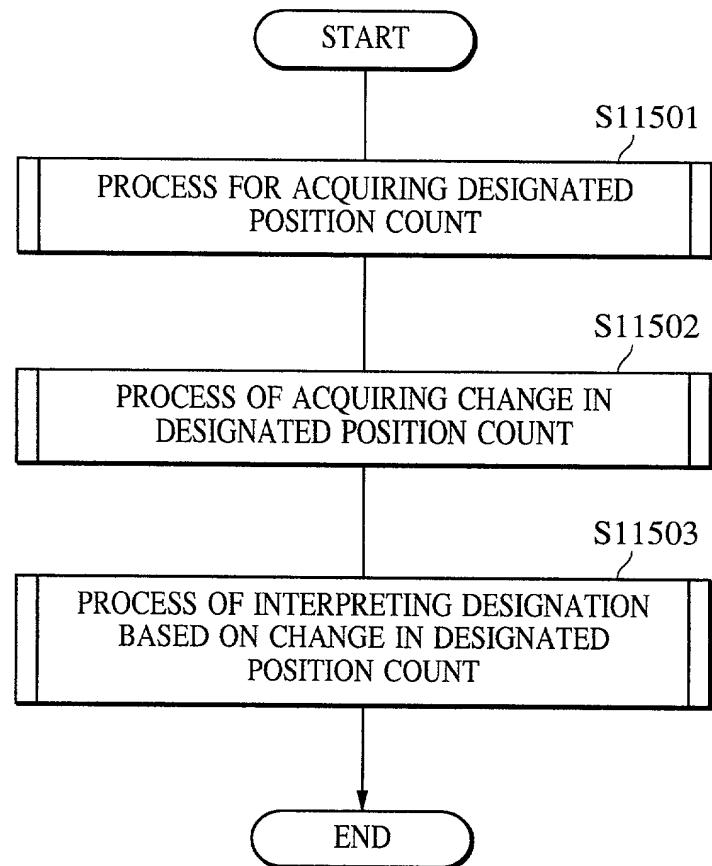


FIG. 115

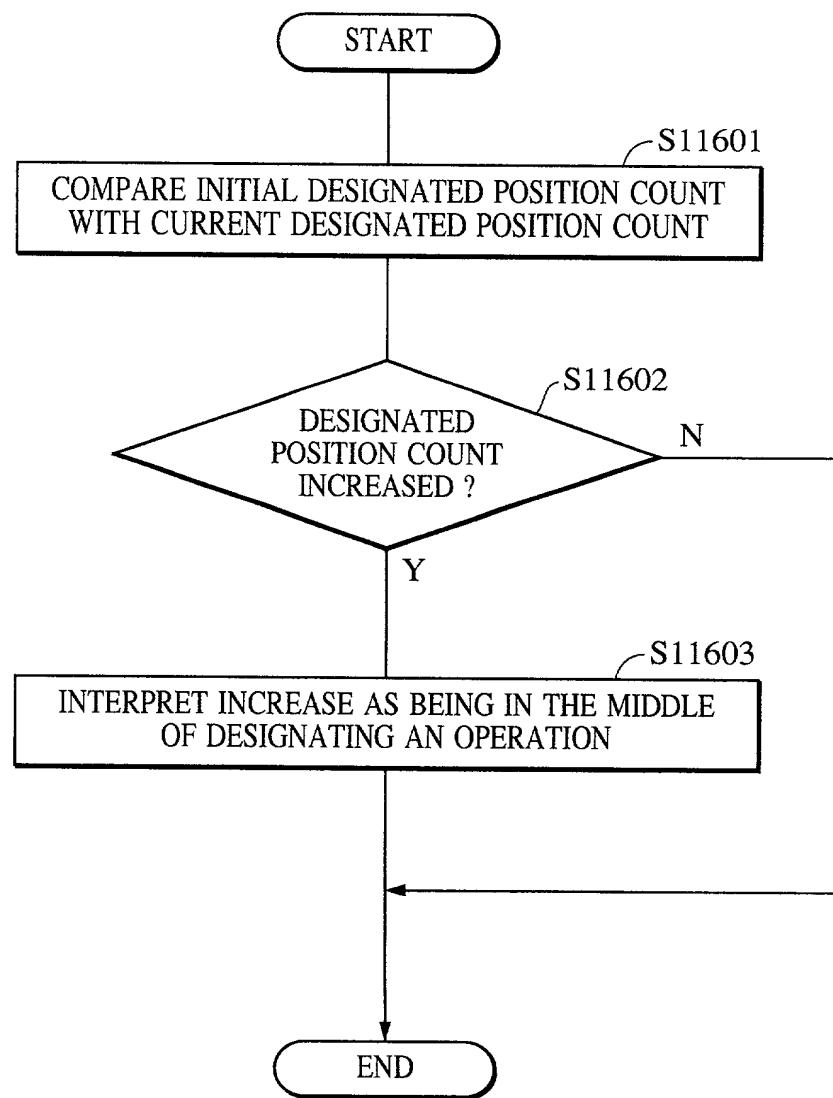


FIG. 116

TIME  $t_1$

INITIAL  
DESIGNATED  
POSITION  
POINT  $At_1$

INITIAL  
DESIGNATED  
POSITION  
POINT  $Bt_1$

In a system for preparing a text by using a knowledge base, knowledge relating to input information is first retrieved from the knowledge base. Then, a plurality of kinds of information used as elements of text to be generated is retrieved in describing order and the information relating thereto is subsequently, a plurality of selected elements of the text to be generated. Then, a text to be output is of the selected elements in describing order.

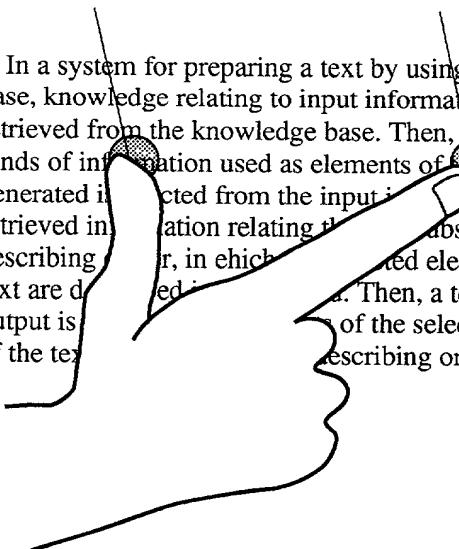


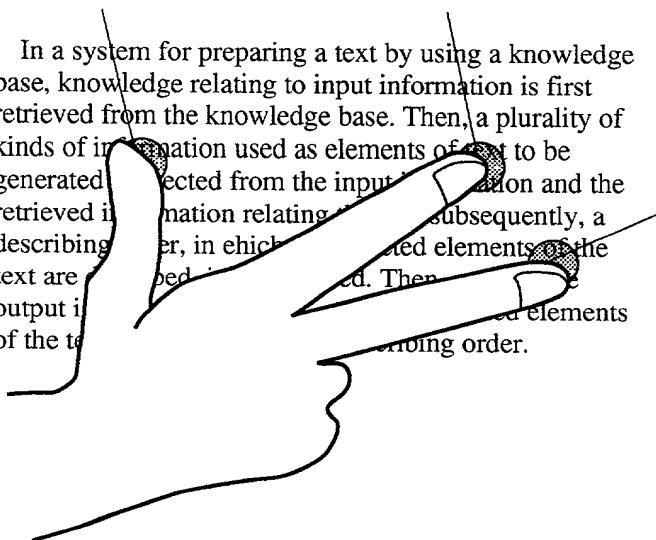
FIG. 117A

TIME  $t_2$

DESIGNATED  
POSITION  
POINT  $At_2$

DESIGNATED  
POSITION  
POINT  $Bt_2$

In a system for preparing a text by using a knowledge base, knowledge relating to input information is first retrieved from the knowledge base. Then, a plurality of kinds of information used as elements of text to be generated is retrieved in describing order and the information relating thereto is subsequently, a plurality of selected elements of the text to be generated. Then, a text to be output is of the selected elements in describing order.



DESIGNATED  
POSITION  
POINT  $Ct_2$

FIG. 117B

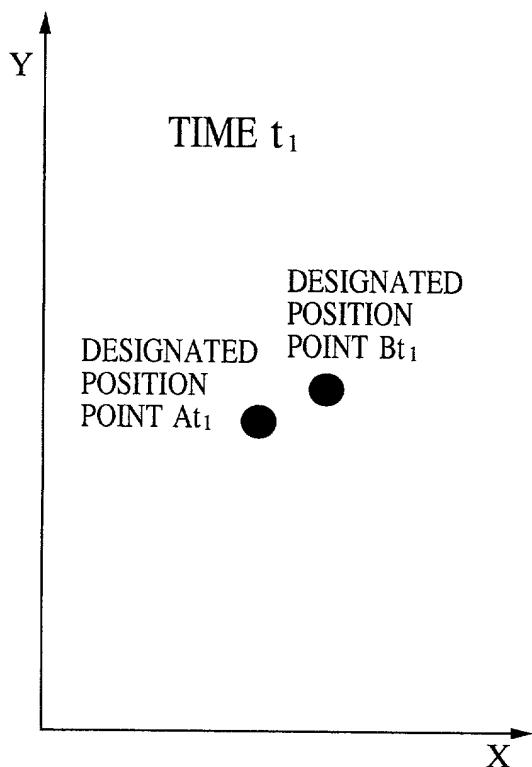


FIG. 118A

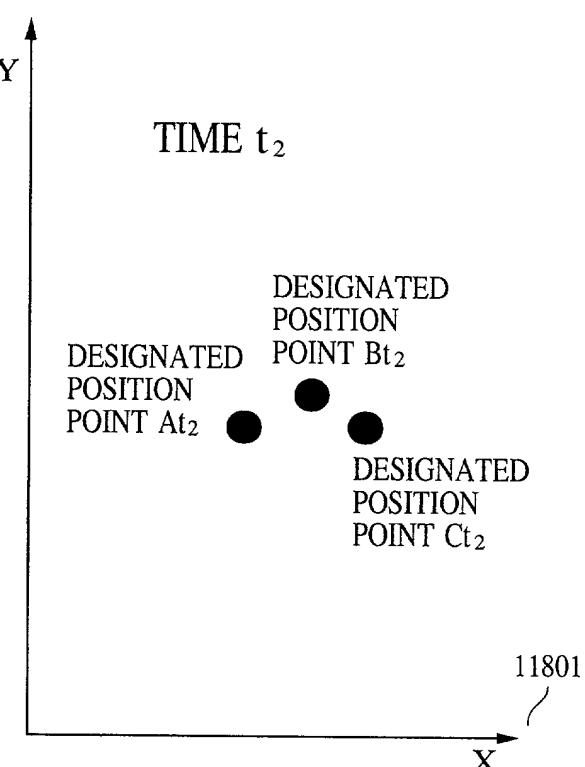


FIG. 118B

DESIGNATED  
FIXED POSITION  
POSITION DATA  
OF POINT A

	$A_x$	$A_y$
$t_1$	3.0	3.0
$t_2$	3.0	3.0
$t_3$	3.0	3.0

FIG. 118C

DESIGNATED  
FIXED POSITION  
POSITION DATA  
OF POINT B

	$B_x$	$B_y$
$t_1$	4.0	4.0
$t_2$	4.0	4.0
$t_3$	4.0	4.0

FIG. 118D

DESIGNATED  
FIXED POSITION  
POSITION DATA  
OF POINT C

	$C_x$	$C_y$
$t_1$		
$t_2$	5.0	3.0
$t_3$	5.0	3.0

FIG. 118E

DATA OF DESIGNATED POSITION COUNT

	DESIGNATED POSITION COUNT	CHANGE IN INITIAL DESIGNATED POSITION COUNT
$t_1$	2	0
$t_2$	3	1
$t_3$	3	1

11803

FIG. 118F

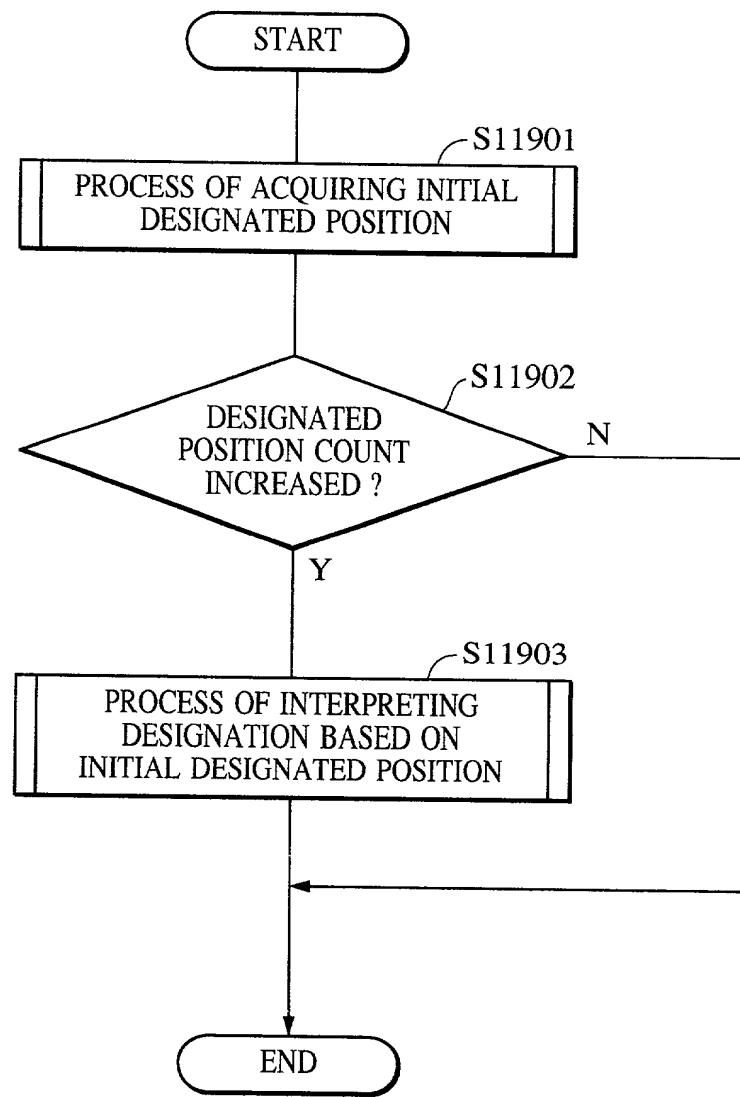


FIG. 119

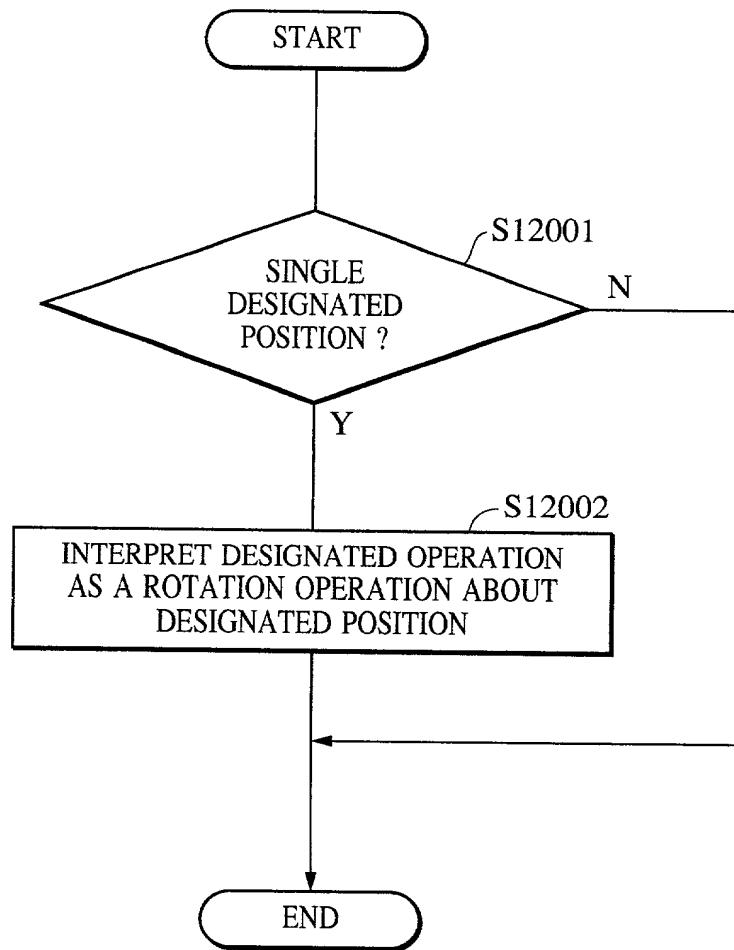


FIG. 120

TIME  $t_1$

INITIAL  
DESIGNATED  
POSITION  
POINT A(3,3)

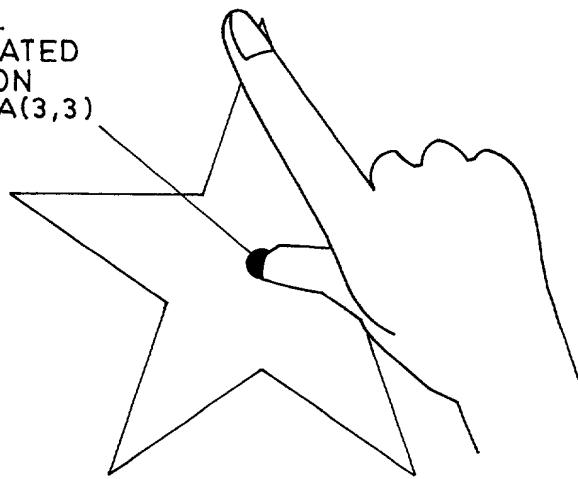


FIG. 121A

TIME  $t_5$

DESIGNATED  
POSITION  
POINT B<sub>t3</sub>

DESIGNATED  
POSITION  
POINT B<sub>t5</sub>

DESIGNATED  
POSITION  
POINT A(3,3)

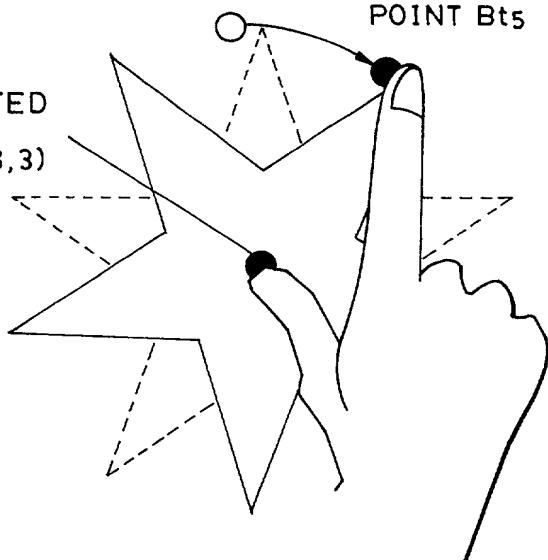


FIG. 121B

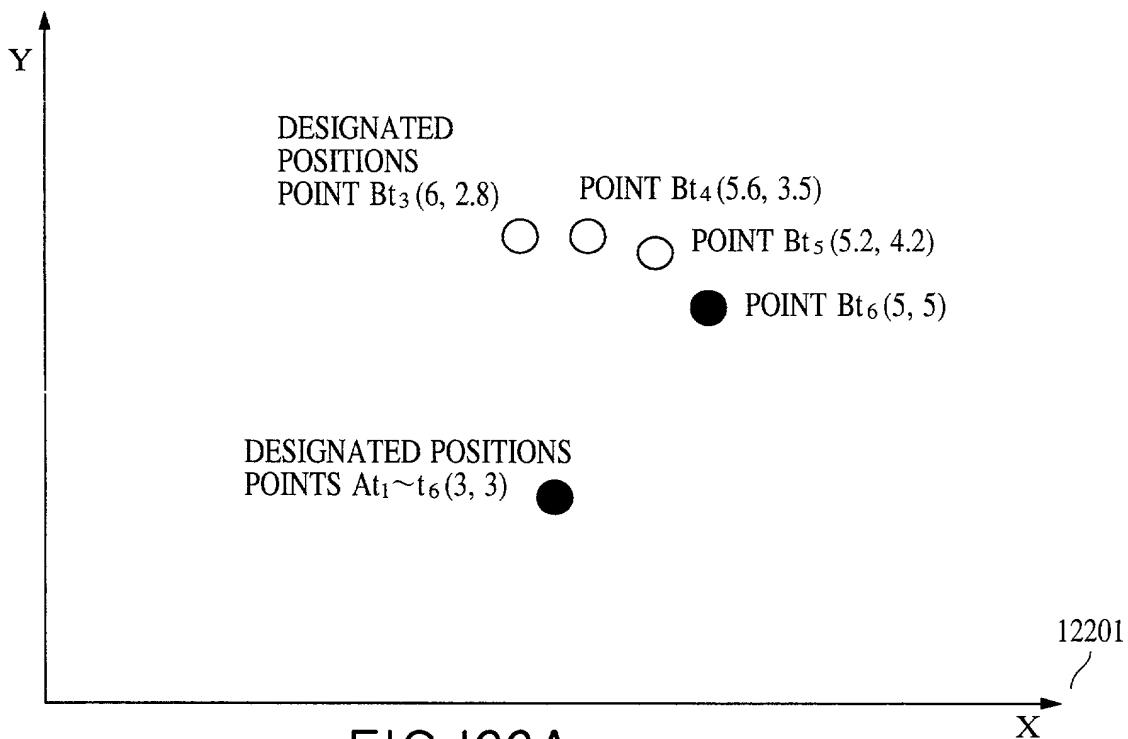


FIG. 122A

DESIGNATED POSITION  
POSITION DATA OF POINT A

	A <sub>X</sub>	A <sub>Y</sub>
t <sub>1</sub>	3.0	3.0
t <sub>2</sub>	3.0	3.0
t <sub>3</sub>	3.0	3.0
t <sub>4</sub>	3.0	3.0
t <sub>5</sub>	3.0	3.0
t <sub>6</sub>	3.0	3.0

DESIGNATED POSITION  
POSITION DATA OF POINT B

	B <sub>X</sub>	B <sub>Y</sub>
t <sub>1</sub>		
t <sub>2</sub>		
t <sub>3</sub>	6.0	2.8
t <sub>4</sub>	5.6	3.5
t <sub>5</sub>	5.2	4.2
t <sub>6</sub>	5.0	5.0

FIG. 122B

FIG. 122C

DATA OF DESIGNATED POSITION COUNT

	DESIGNATED POSITION COUNT	CHANGE IN INITIAL DESIGNATED POSITION COUNT
t <sub>1</sub>	1	0
t <sub>2</sub>	1	0
t <sub>3</sub>	2	1
t <sub>4</sub>	2	1
t <sub>5</sub>	2	1
t <sub>6</sub>	2	1

12203

FIG. 122D

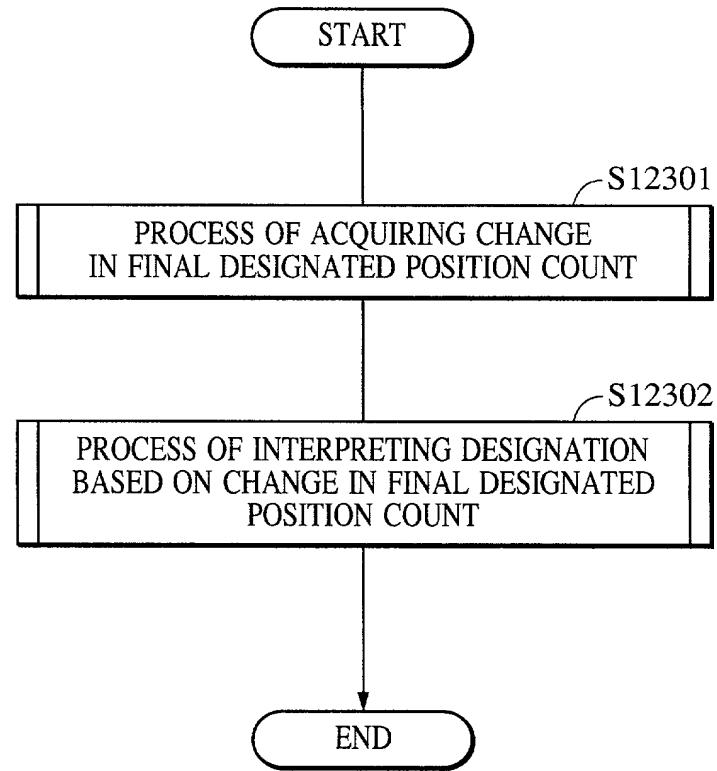


FIG. 123

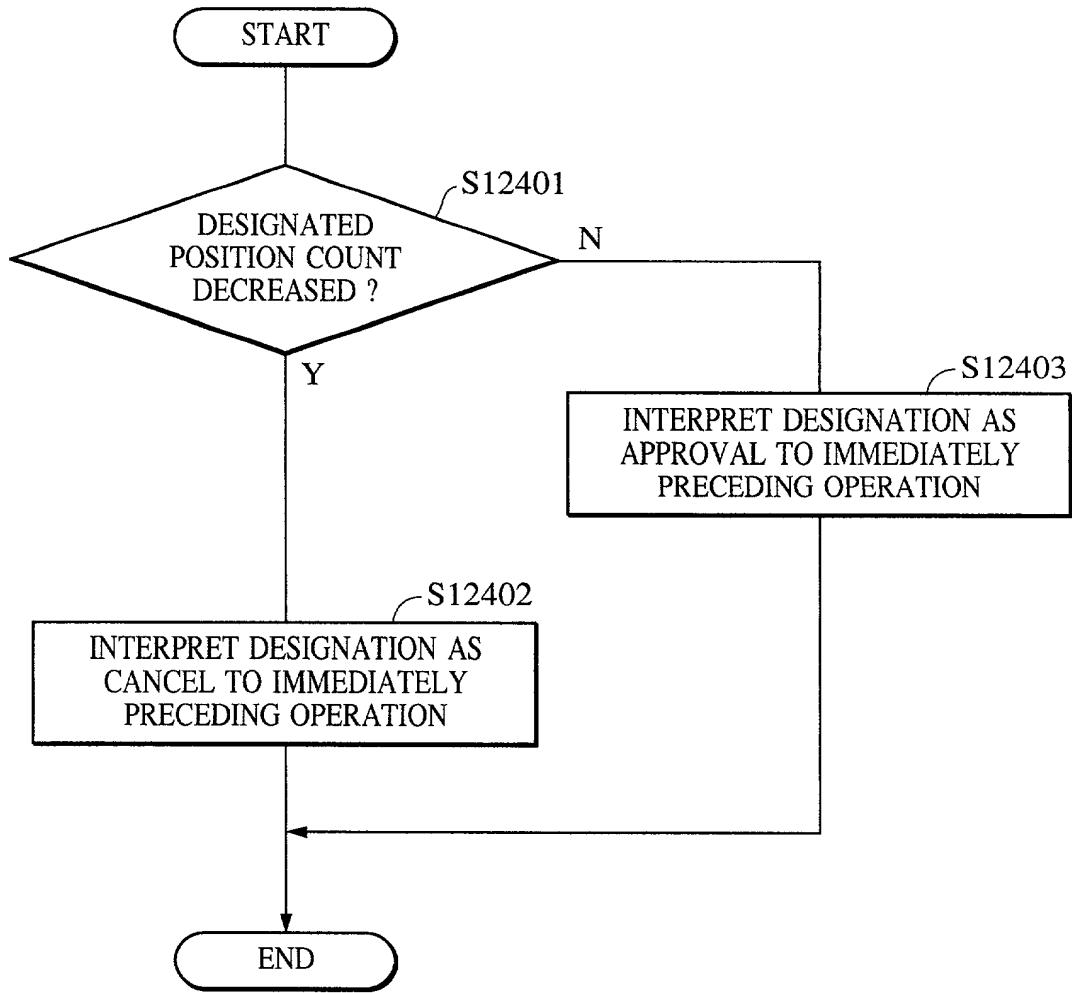


FIG. I24

TIME  $t_1$

DESIGNATED  
POSITION  
POINT  $A_{t_1}$

DESIGNATED  
POSITION  
POINT  $B_{t_1}$

DESIGNATED  
POSITION  
POINT  $C_{t_1}$

In a system for preparing a text by using a knowledge base, knowledge relating to input information is first retrieved from the knowledge base. Then, a plurality of kinds of information used as elements of a text to be generated is selected from the input information and the retrieved information relating thereto. Subsequently, a text, in which the selected elements of the text are described in a predetermined order, is generated. Then, a text to be output is generated in accordance with the selected elements of the text in a predetermined order.

FIG. 125A

TIME  $t_2$

DESIGNATED  
POSITION  
POINT  $A_{t_2}$

DESIGNATED  
POSITION  
POINT  $B_{t_2}$

In a system for preparing a text by using a knowledge base, knowledge relating to input information is first retrieved from the knowledge base. Then, a plurality of kinds of information used as elements of a text to be generated is selected from the input information and the retrieved information relating thereto. Subsequently, a text, in which the selected elements of the text are described in a predetermined order, is generated. Then, a text to be output is generated in accordance with the selected elements of the text in a predetermined order.

FIG. 125B

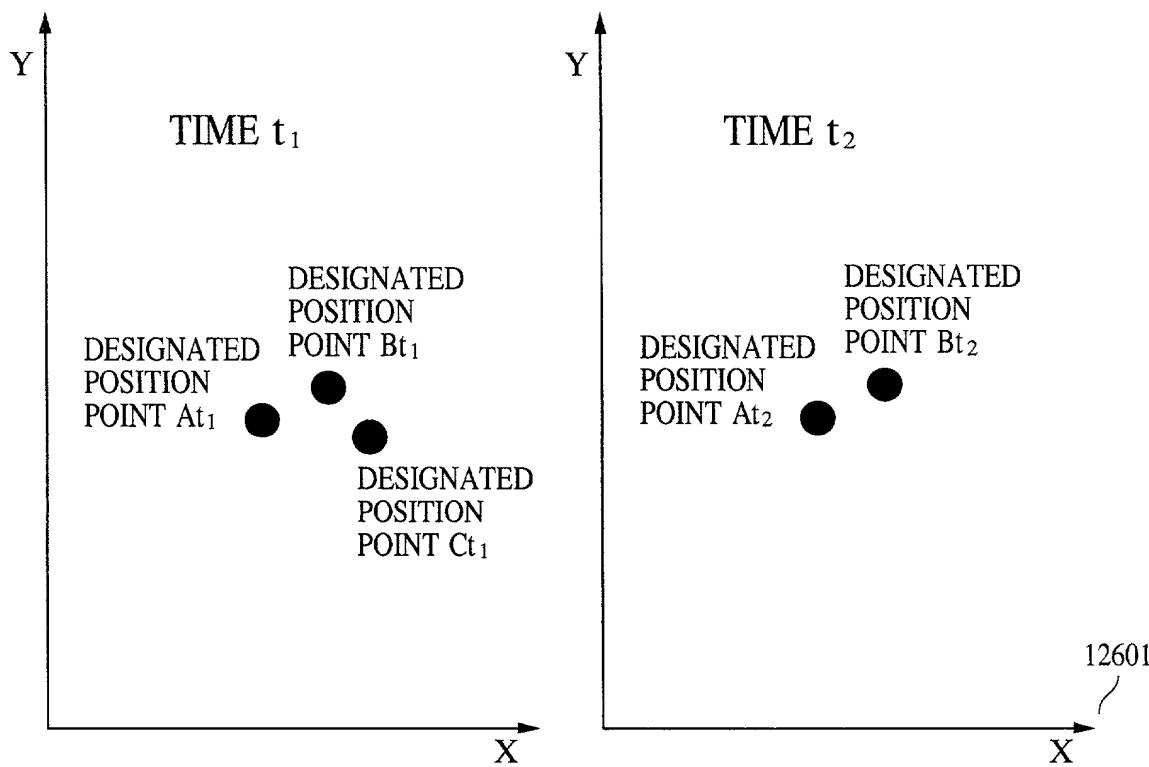


FIG. I26A

FIG. I26B

DESIGNATED POSITION  
POSITION DATA OF  
POINT A

	$A_x$	$A_y$
$t_1$	3.0	3.0
$t_2$	3.0	3.0

FIG. I26C

DESIGNATED POSITION  
POSITION DATA OF  
POINT B

	$B_x$	$B_y$
$t_1$	4.0	4.0
$t_2$	4.0	4.0

FIG. I26D

DESIGNATED POSITION  
POSITION DATA OF  
POINT C

	$C_x$	$C_y$
$t_1$	5.0	3.0
$t_2$		

12602

FIG. I26E

DATA OF DESIGNATED POSITION COUNT

	DESIGNATED POSITION COUNT	CHANGE IN INITIAL DESIGNATED POSITION COUNT
$t_1$	3	0
$t_2$	2	-1

12603

FIG. I26F

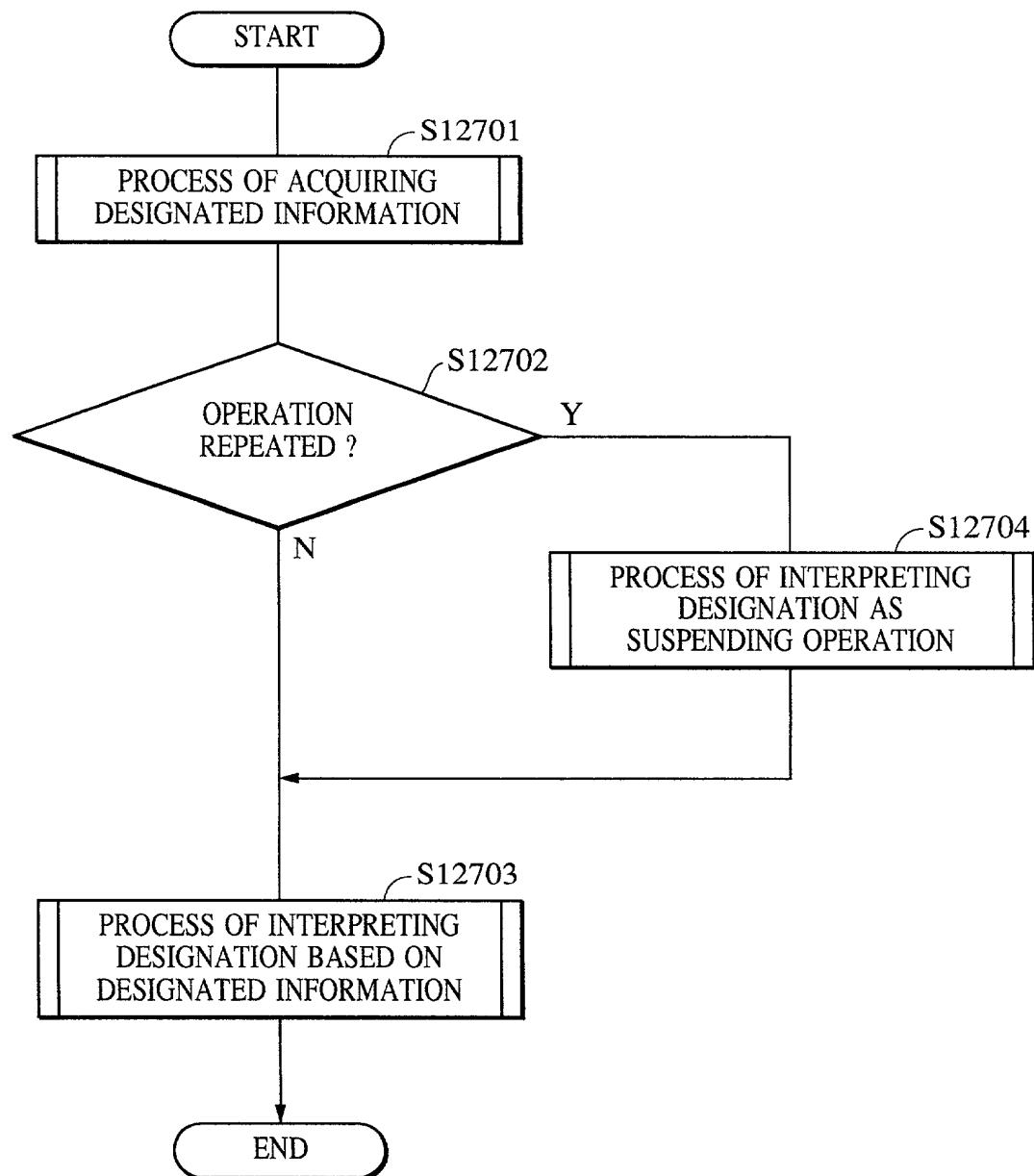


FIG.127

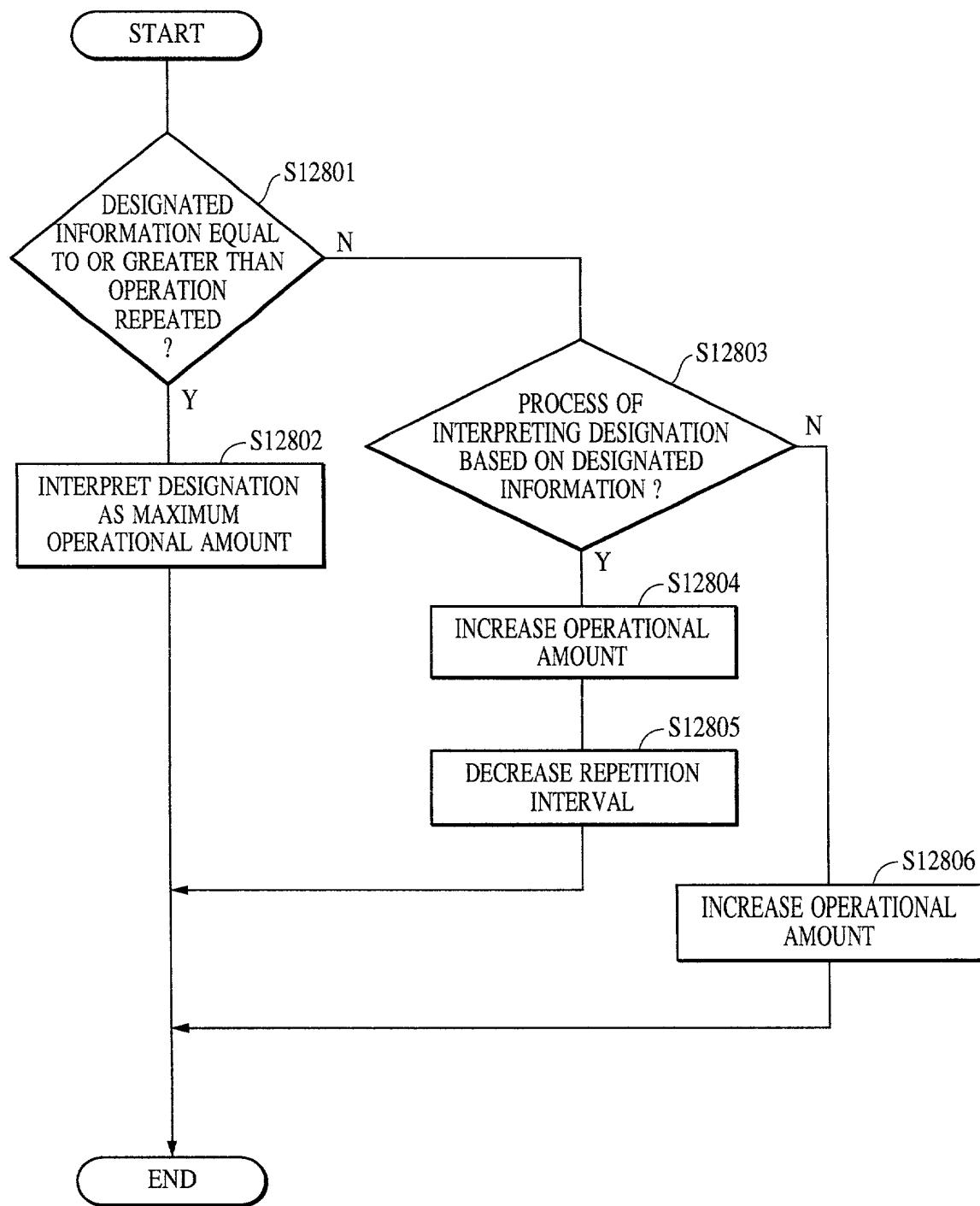


FIG. 128

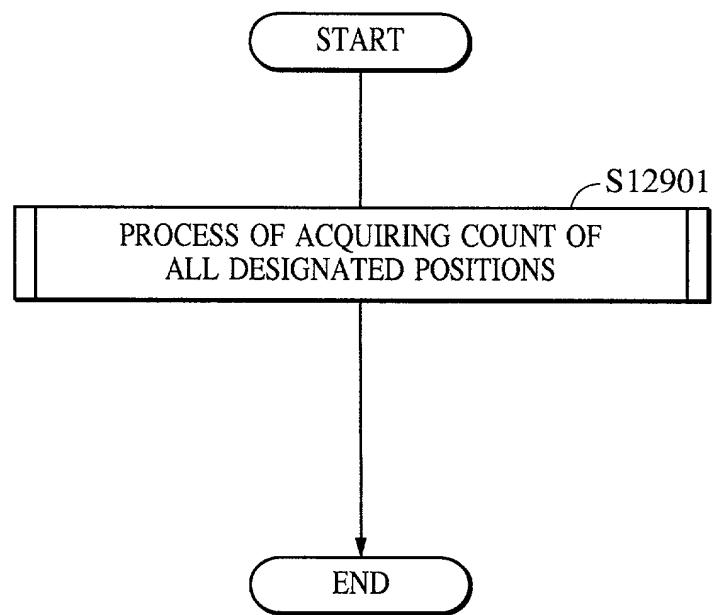


FIG. 129

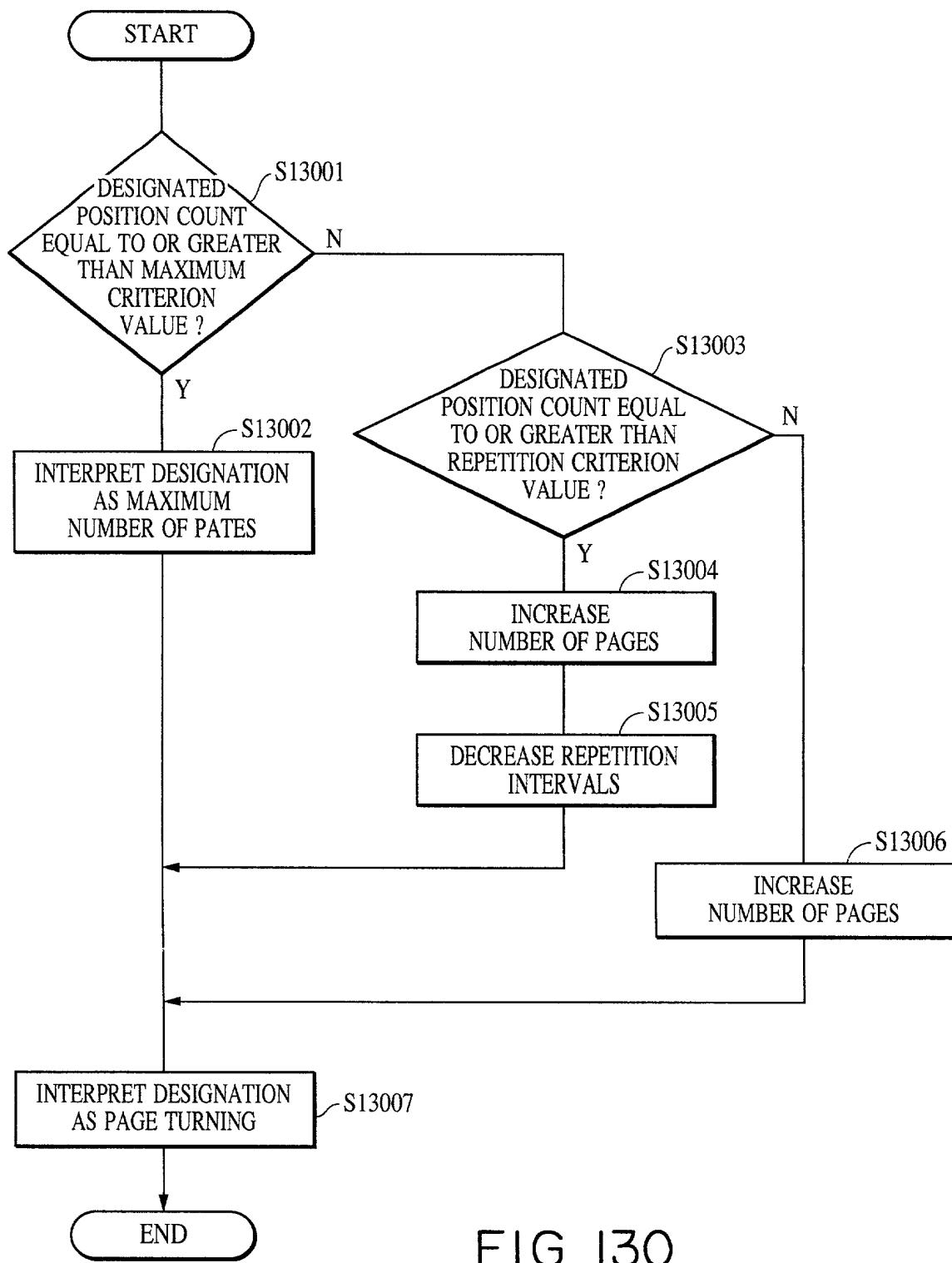


FIG. 130

PAGE TURNING

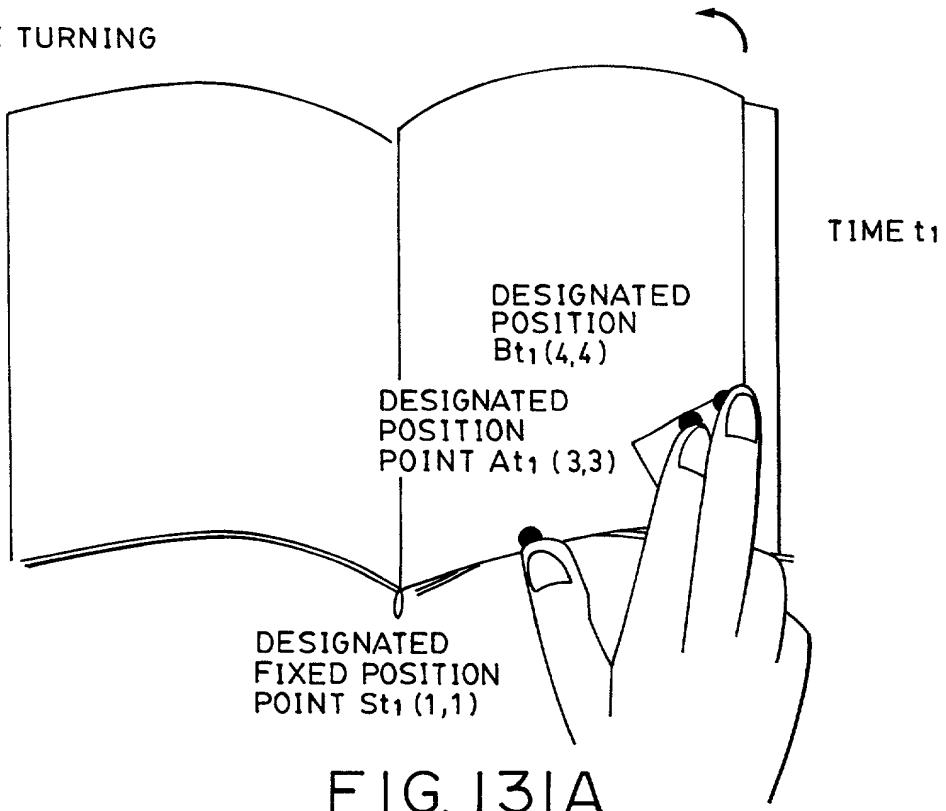


FIG. 131A

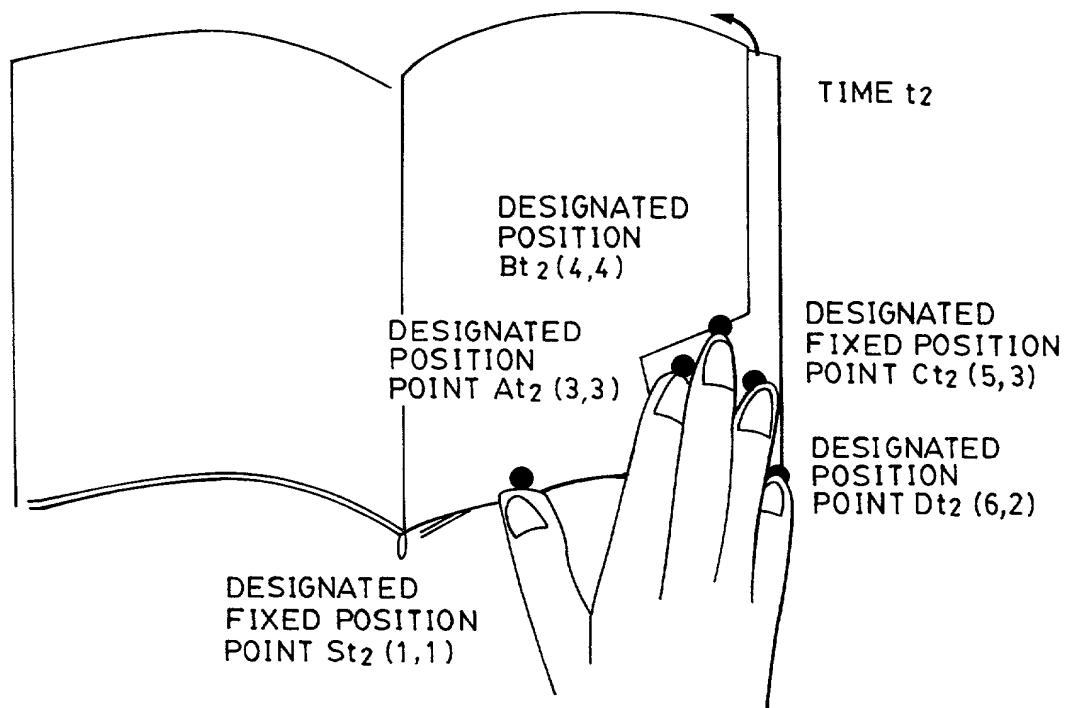


FIG. 131B

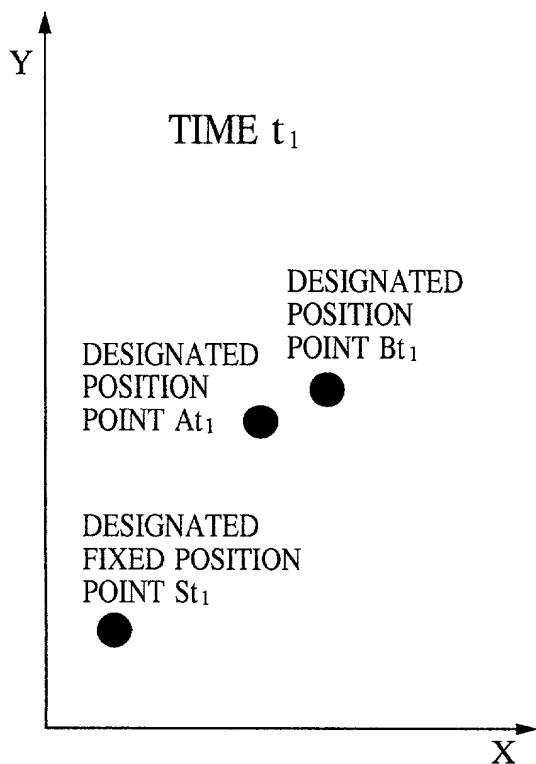


FIG. I32A

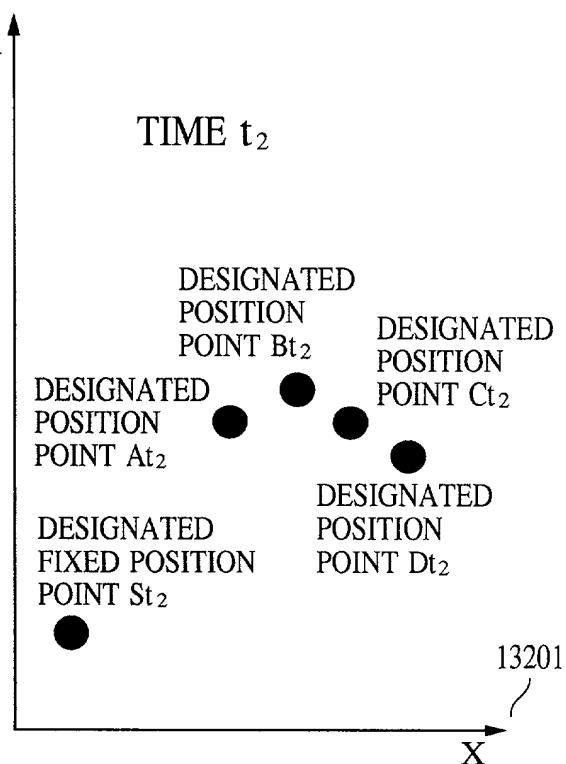


FIG. I32B

DESIGNATED  
FIXED POSITION  
POSITION DATA  
OF POINT S

	$S_x$	$S_y$
$t_1$	1.0	1.0
$t_2$	1.0	1.0

FIG. I32C

DESIGNATED  
POSITION  
POSITION DATA  
OF POINT A

	$A_x$	$A_y$
$t_1$	3.0	3.0
$t_2$	3.0	3.0

FIG. I32D

DESIGNATED  
POSITION  
POSITION DATA  
OF POINT B

	$B_x$	$B_y$
$t_1$	4.0	4.0
$t_2$	4.0	4.0

FIG. I32E

DESIGNATED  
POSITION  
POSITION DATA  
OF POINT C

	$C_x$	$C_y$
$t_1$		
$t_2$	5.0	3.0

FIG. I32F

DESIGNATED  
POSITION  
POSITION DATA  
OF POINT D

	$D_x$	$D_y$
$t_1$		
$t_2$	6.0	2.0

FIG. I32G

13203

DATA OF DESIGNATED POSITION COUNT

	INCREASE IN NUMBER	TOTAL NUMBER
$t_1$	2	3
$t_2$	2	5

FIG. I32H

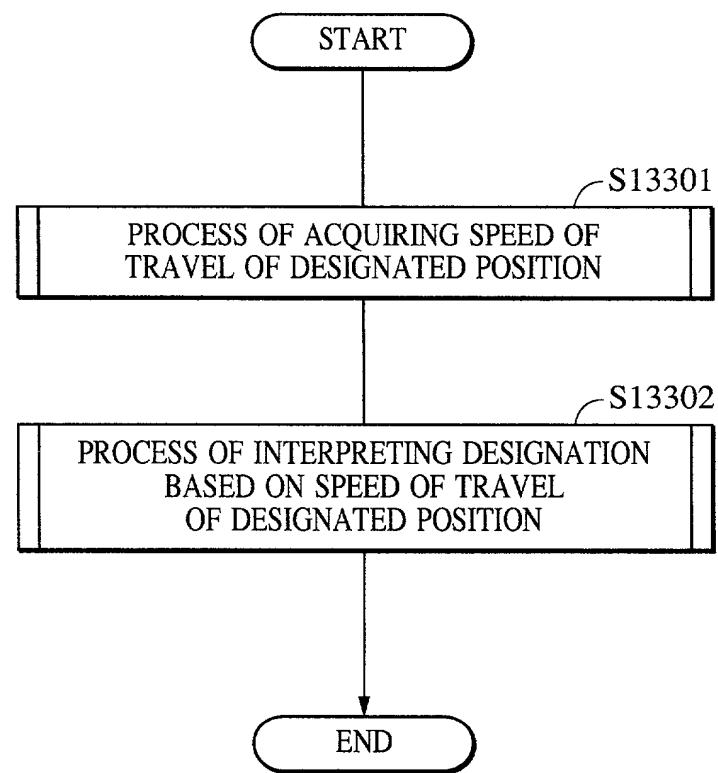


FIG. 133

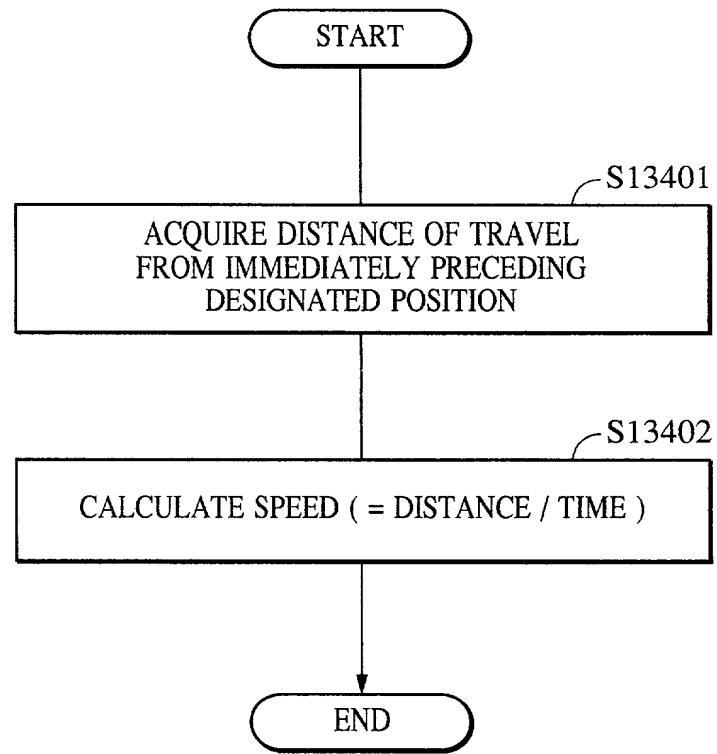


FIG. 134

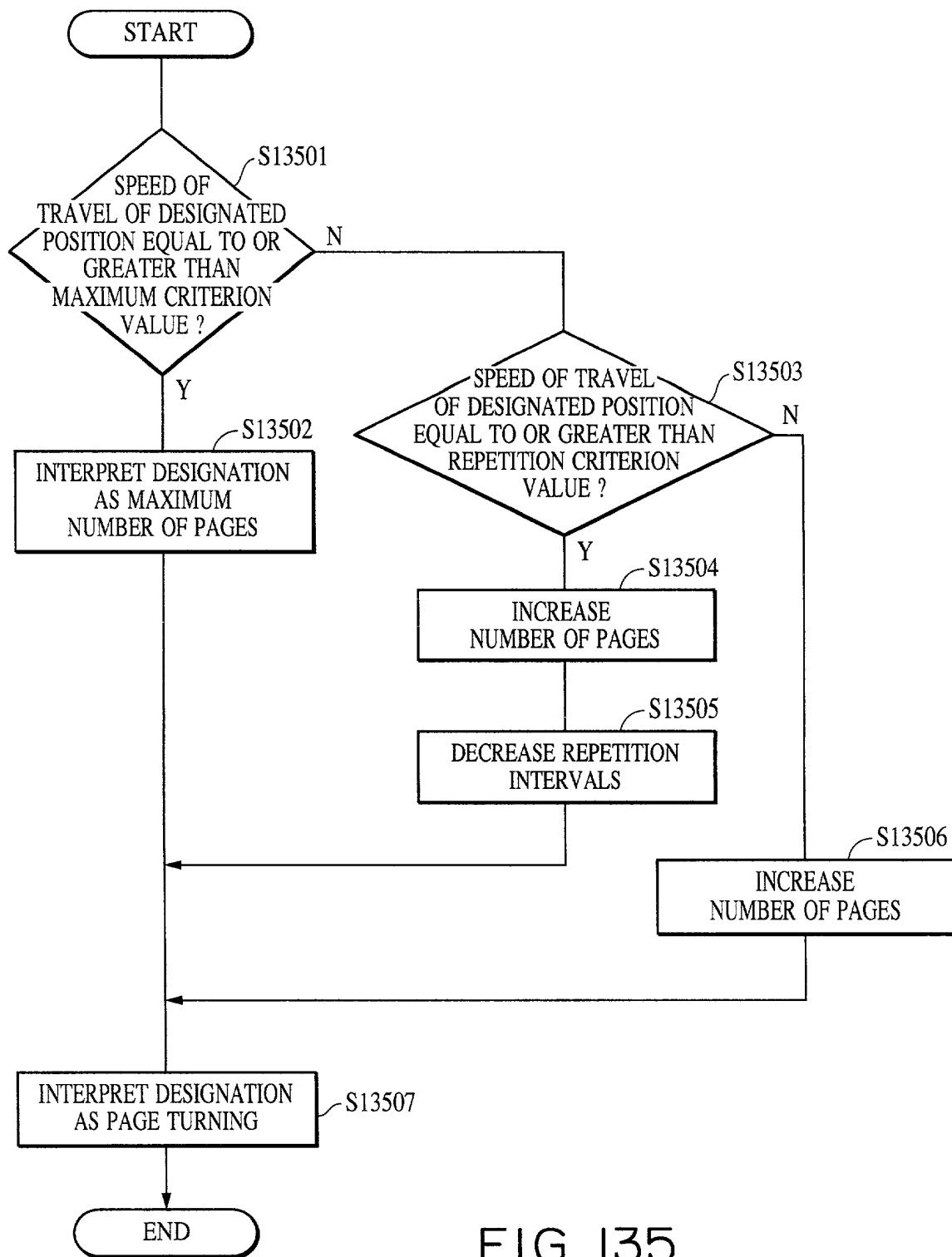


FIG. 135

PAGE TURNING

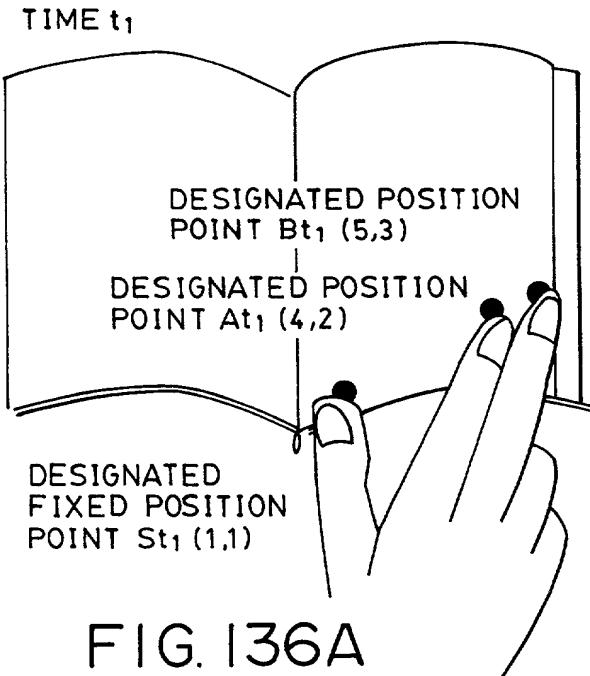


FIG. 136A

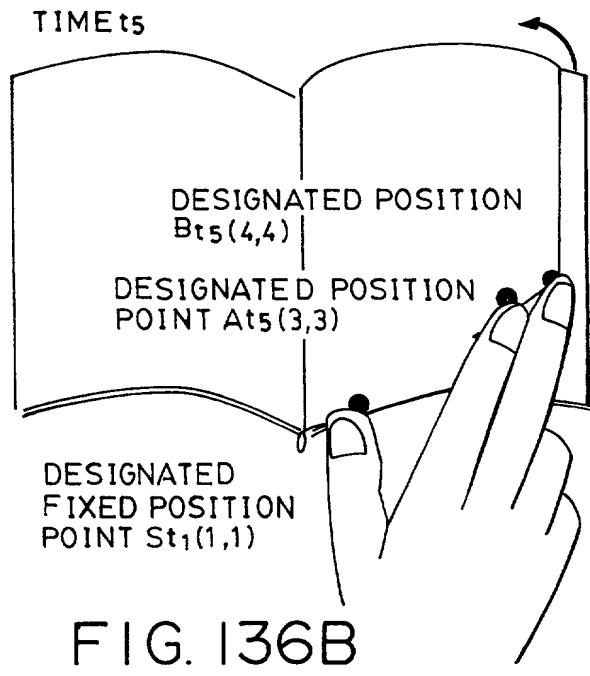


FIG. 136B

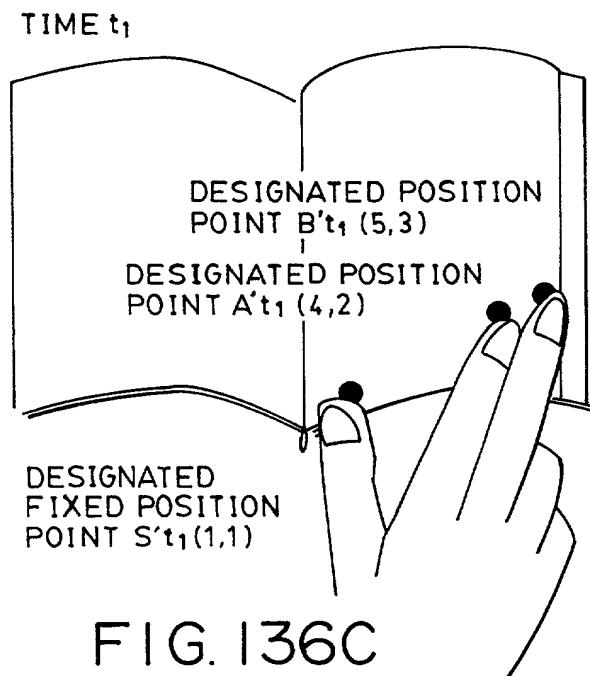


FIG. 136C

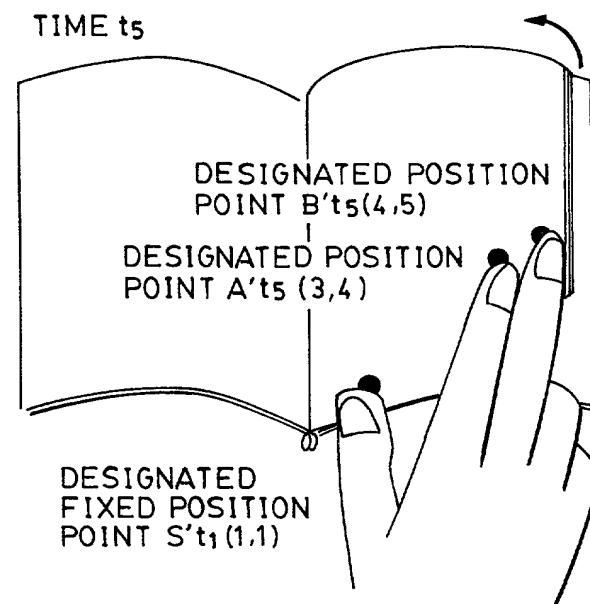


FIG. 136D

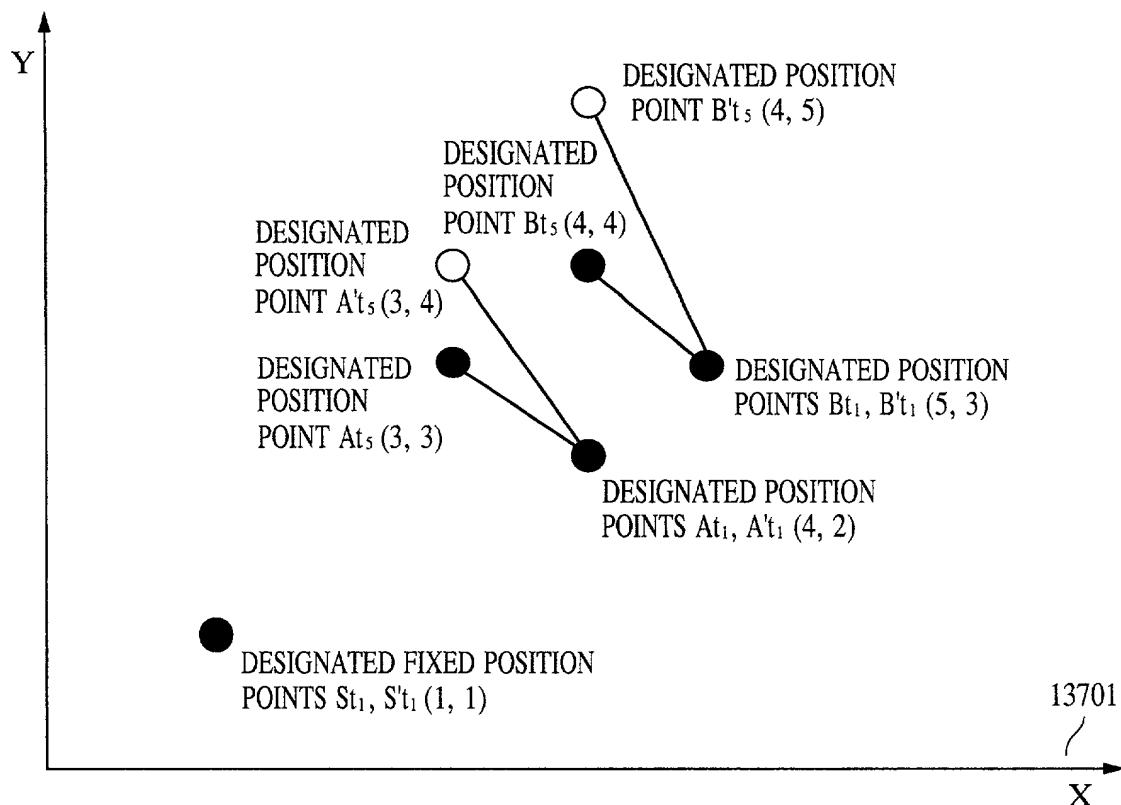


FIG. 137A

DESIGNATED FIXED POSITION POSITION DATA OF POINT S		DESIGNATED POSITION POSITION DATA OF POINT A		DESIGNATED POSITION POSITION DATA OF POINT B		DESIGNATED POSITION POSITION DATA OF POINT A'		DESIGNATED POSITION POSITION DATA OF POINT B'	
$S_x$	$S_y$	$A_x$	$A_y$	$B_x$	$B_y$	$A'_x$	$A'_y$	$B'_x$	$B'_y$
$t_1$	1.0	4.0	2.0	$t_1$	5.0	3.0	$t_1$	4.0	2.0
$t_2$	1.0	1.0	2.2	$t_2$	4.8	3.2	$t_2$	3.8	2.4
$t_3$	1.0	1.0	2.4	$t_3$	4.6	3.4	$t_3$	3.6	2.8
$t_4$	1.0	1.0	2.6	$t_4$	4.4	3.6	$t_4$	3.4	3.2
$t_5$	1.0	1.0	3.0	$t_5$	4.0	4.0	$t_5$	3.0	4.0

FIG. 137B FIG. 137C

FIG. 137D FIG. 137E FIG. 137F

DATA OF SPEED OF TRAVEL OF DESIGNATED POSITION

	SPEED OF POINT A	RATE OF INCREASE OF SPEED OF POINT A	SPEED OF POINT B	RATE OF INCREASE OF SPEED OF POINT B	SPEED OF POINT A'	RATE OF INCREASE OF SPEED OF POINT A'	SPEED OF POINT B'	RATE OF INCREASE OF SPEED OF POINT B'
$t_1$	0.000		0.000	0.0	0.000		0.000	
$t_2$	0.283		0.283		0.447		0.447	
$t_3$	0.283	1.00	0.283	1.00	0.447	1.00	0.447	1.00
$t_4$	0.283	1.00	0.283	1.00	0.447	1.00	0.447	1.00
$t_5$	0.354	1.25	0.283	1.00	0.559	1.25	0.559	1.25

13703

FIG. 137G

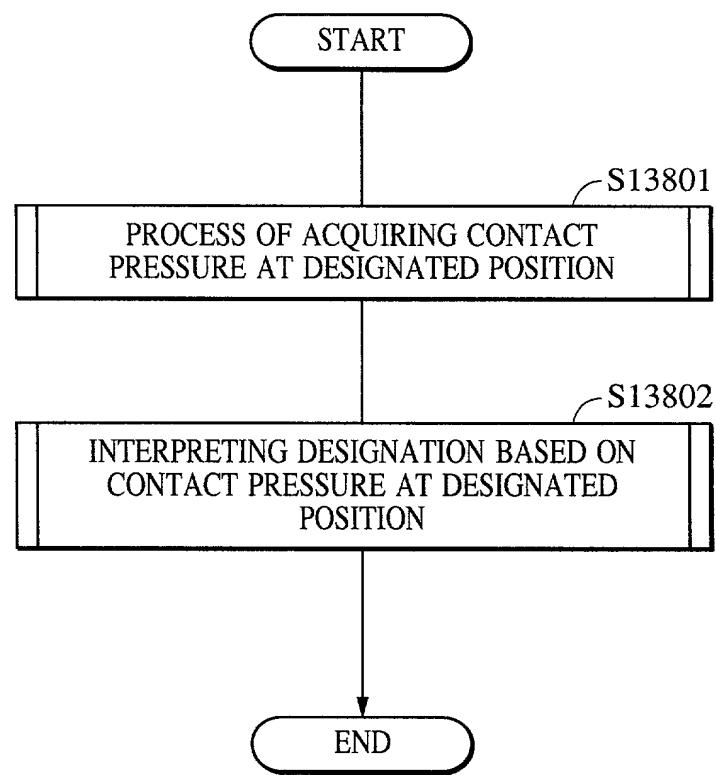


FIG. 138

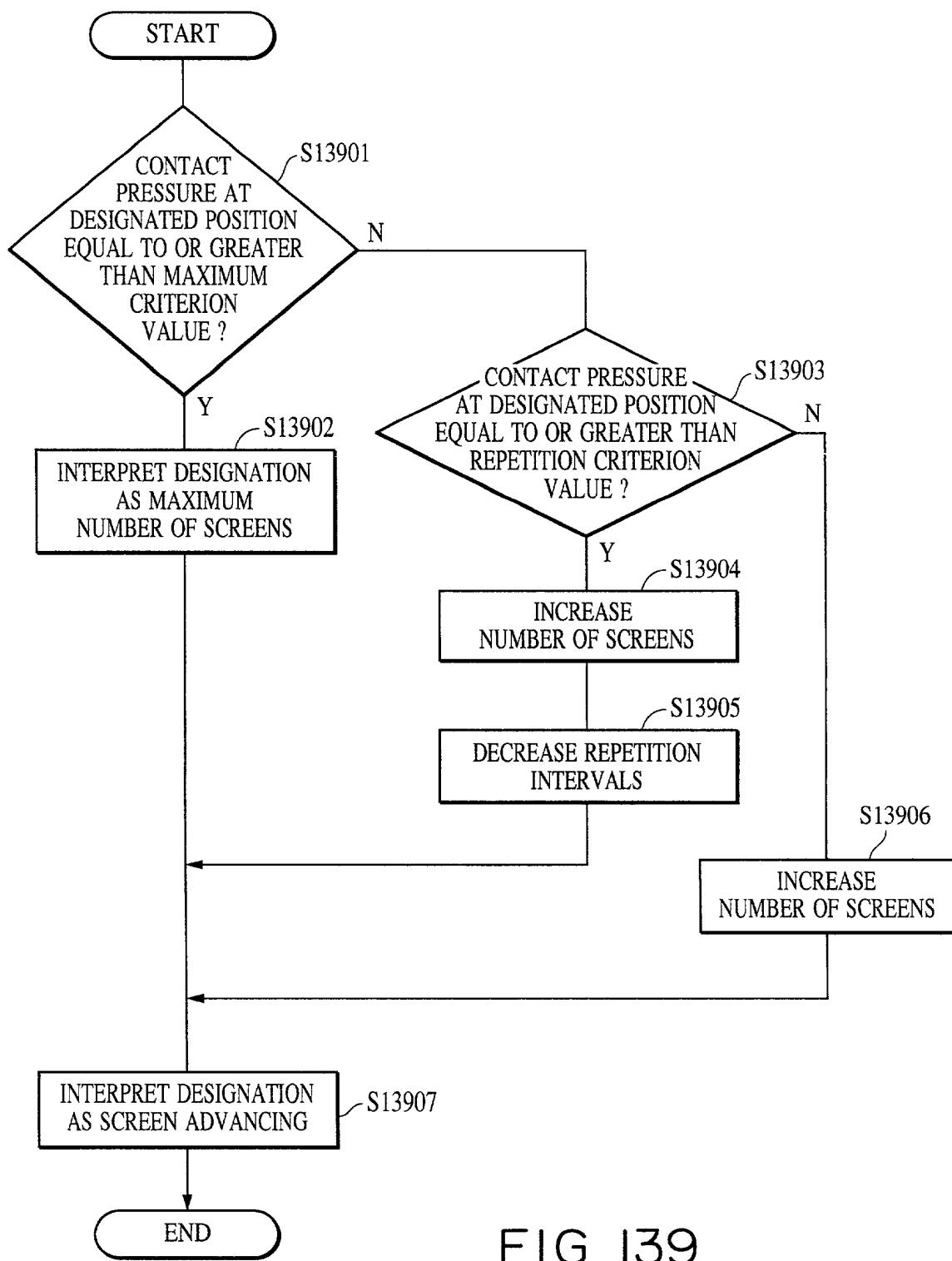


FIG. 139

## SCREEN SHIFTING

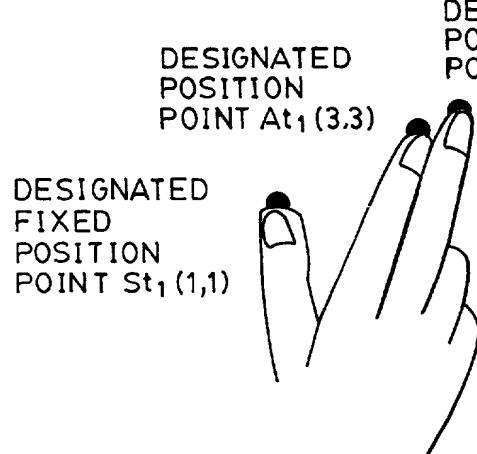


FIG. 140A

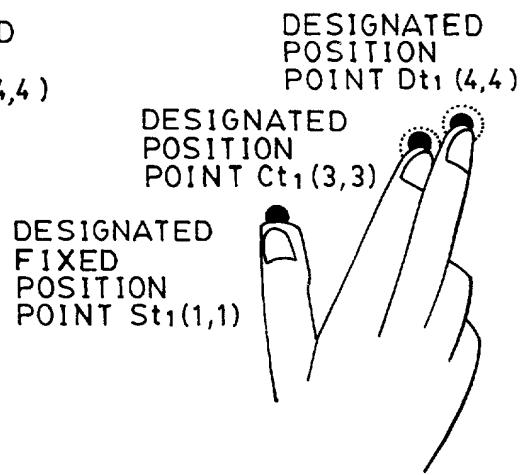


FIG. 140C

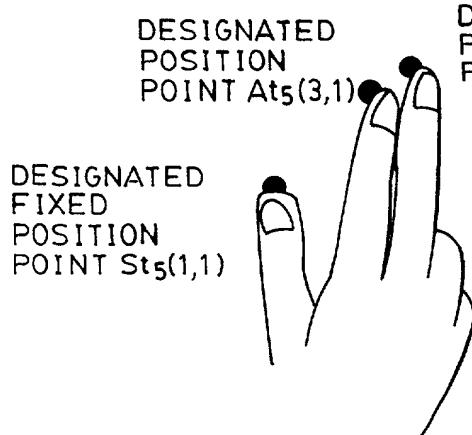


FIG. 140B

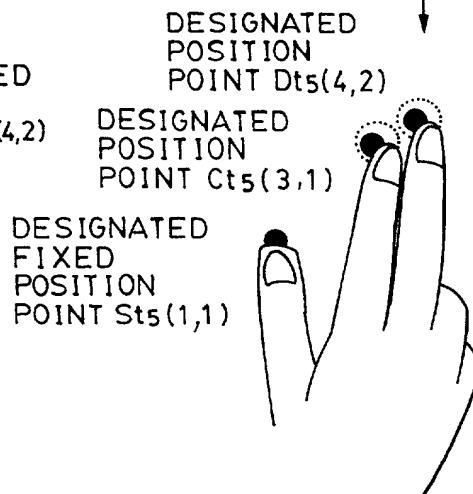


FIG. 140D

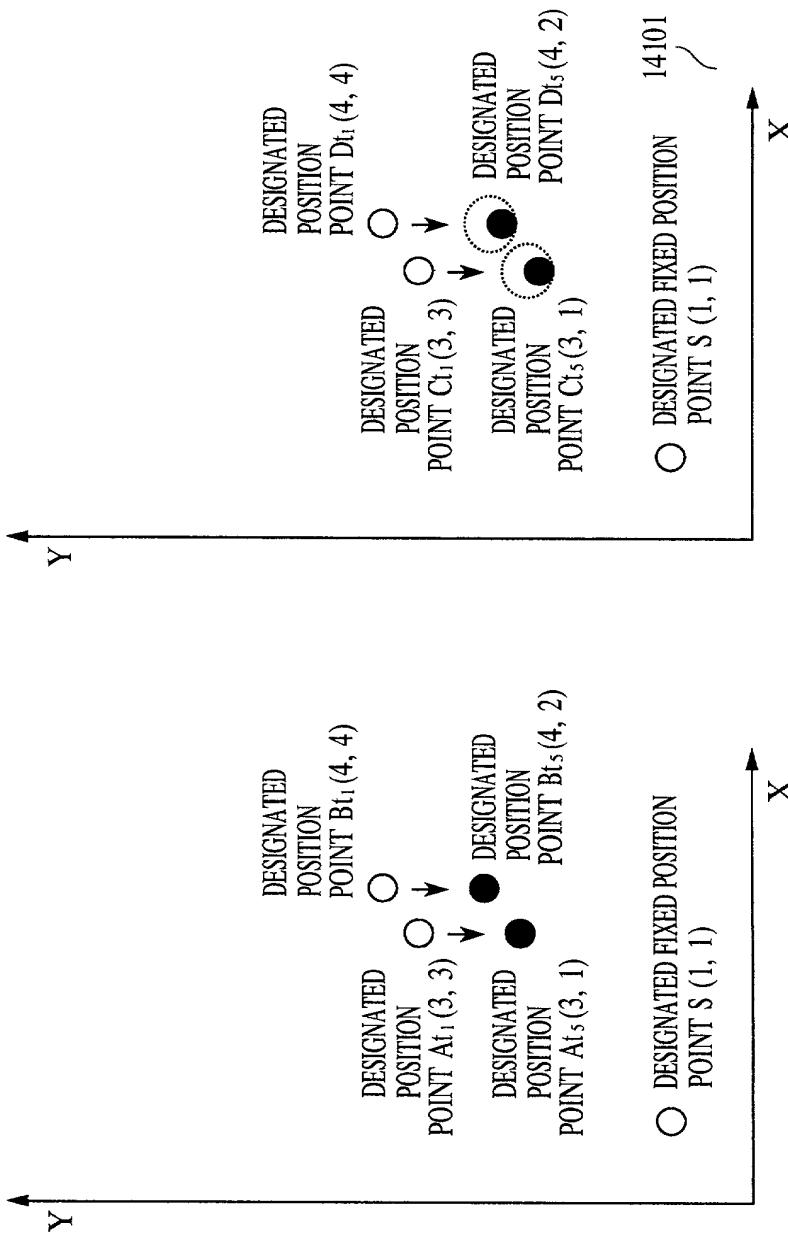


FIG. 14.1A

FIG. 14.1B

DESIGNATED  
FIXED POSITION  
POSITION DATA  
OF POINT S

	S <sub>x</sub>	S <sub>y</sub>	A <sub>x</sub>	A <sub>y</sub>
t <sub>1</sub>	1.0	1.0	t <sub>1</sub>	3.0
t <sub>2</sub>	1.0	1.0	t <sub>2</sub>	3.0
t <sub>3</sub>	1.0	1.0	t <sub>3</sub>	3.0
t <sub>4</sub>	1.0	1.0	t <sub>4</sub>	3.0
t <sub>5</sub>	1.0	1.0	t <sub>5</sub>	3.0

DESIGNATED  
POSITION  
POSITION DATA  
OF POINT A

		B <sub>x</sub>	B <sub>y</sub>	C <sub>x</sub>	C <sub>y</sub>
t <sub>1</sub>		4.0	4.0	t <sub>1</sub>	3.0
t <sub>2</sub>		4.0	3.6	t <sub>2</sub>	3.0
t <sub>3</sub>		4.0	3.2	t <sub>3</sub>	3.0
t <sub>4</sub>		4.0	2.8	t <sub>4</sub>	3.0
t <sub>5</sub>		4.0	2.0	t <sub>5</sub>	3.0

DESIGNATED  
POSITION  
POSITION DATA  
OF POINT B

				D <sub>x</sub>	D <sub>y</sub>
t <sub>1</sub>				t <sub>1</sub>	4.0
t <sub>2</sub>				t <sub>2</sub>	4.0
t <sub>3</sub>				t <sub>3</sub>	4.0
t <sub>4</sub>				t <sub>4</sub>	4.0
t <sub>5</sub>				t <sub>5</sub>	4.0

14102

FIG. 14IC FIG. 14ID

FIG. 14IE FIG. 14IF

FIG. 14IG FIG. 14IH

DATA OF CONTACT PRESSURE AT DESIGNATED POSITION

	CONTACT PRESSURE AT POINT S	CONTACT PRESSURE AT POINT A	CONTACT PRESSURE AT POINT B	CONTACT PRESSURE AT POINT C	CONTACT PRESSURE AT POINT D
t <sub>1</sub>	100	100	100	100	100
t <sub>2</sub>	105	105	105	140	140
t <sub>3</sub>	110	110	110	160	160
t <sub>4</sub>	105	105	105	190	190
t <sub>5</sub>	100	100	100	210	210

14103

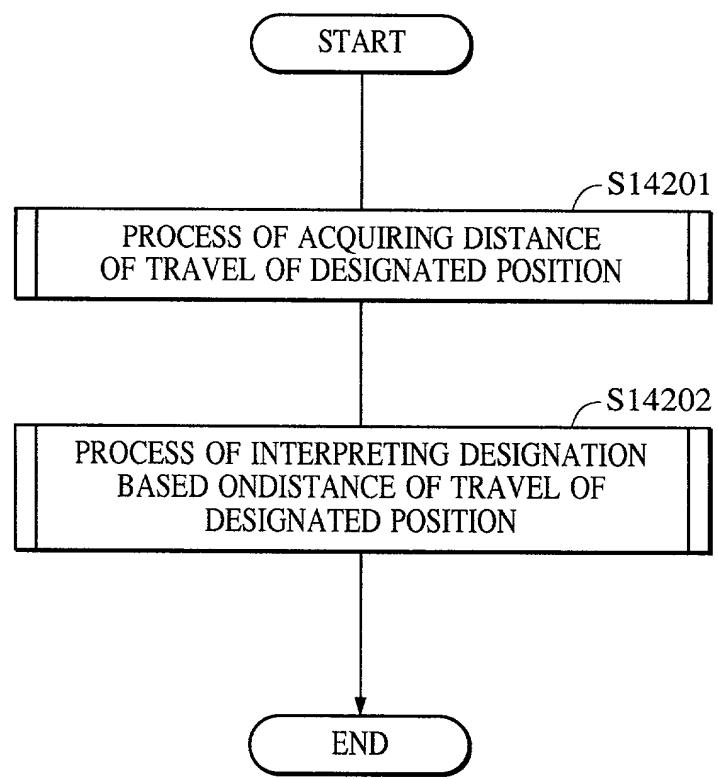


FIG. I42

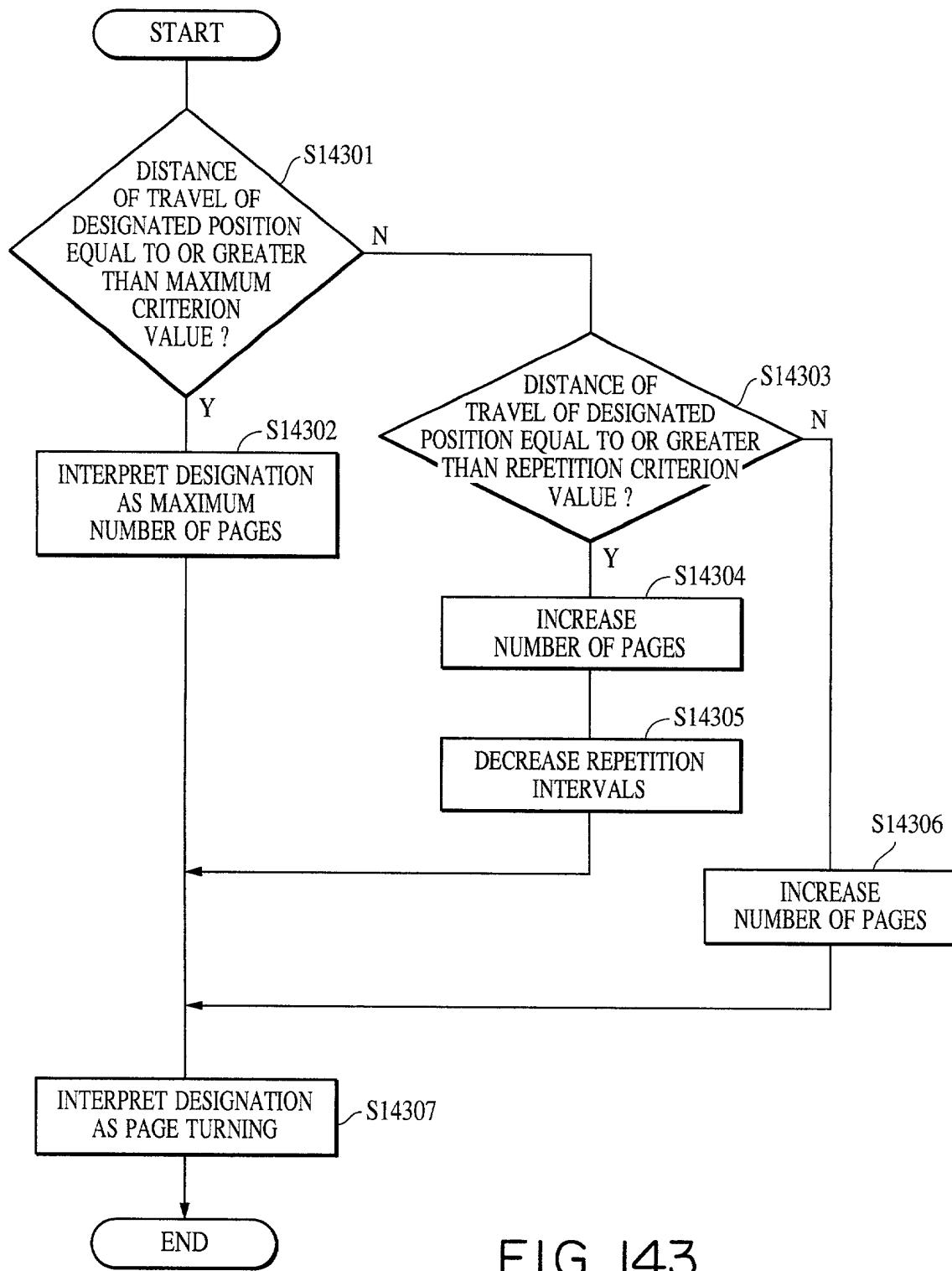
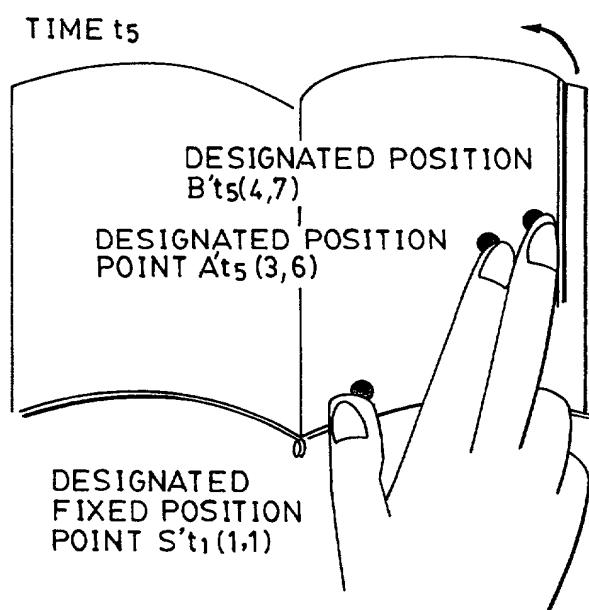
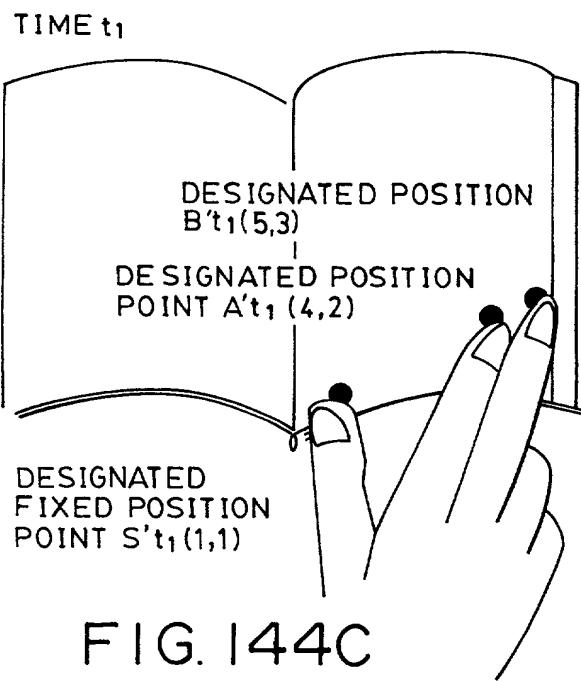
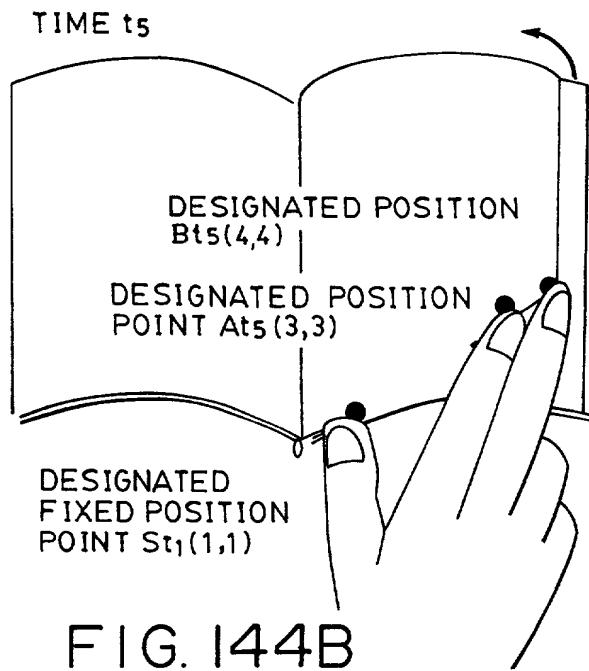
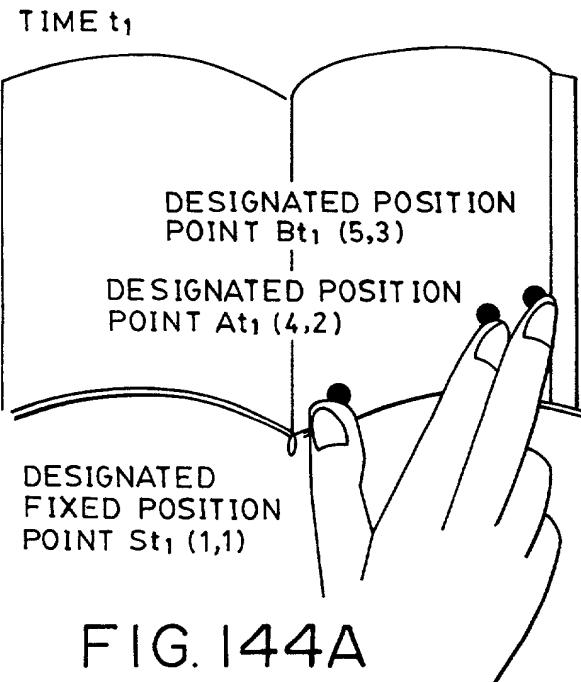


FIG. 143

PAGE TURNING



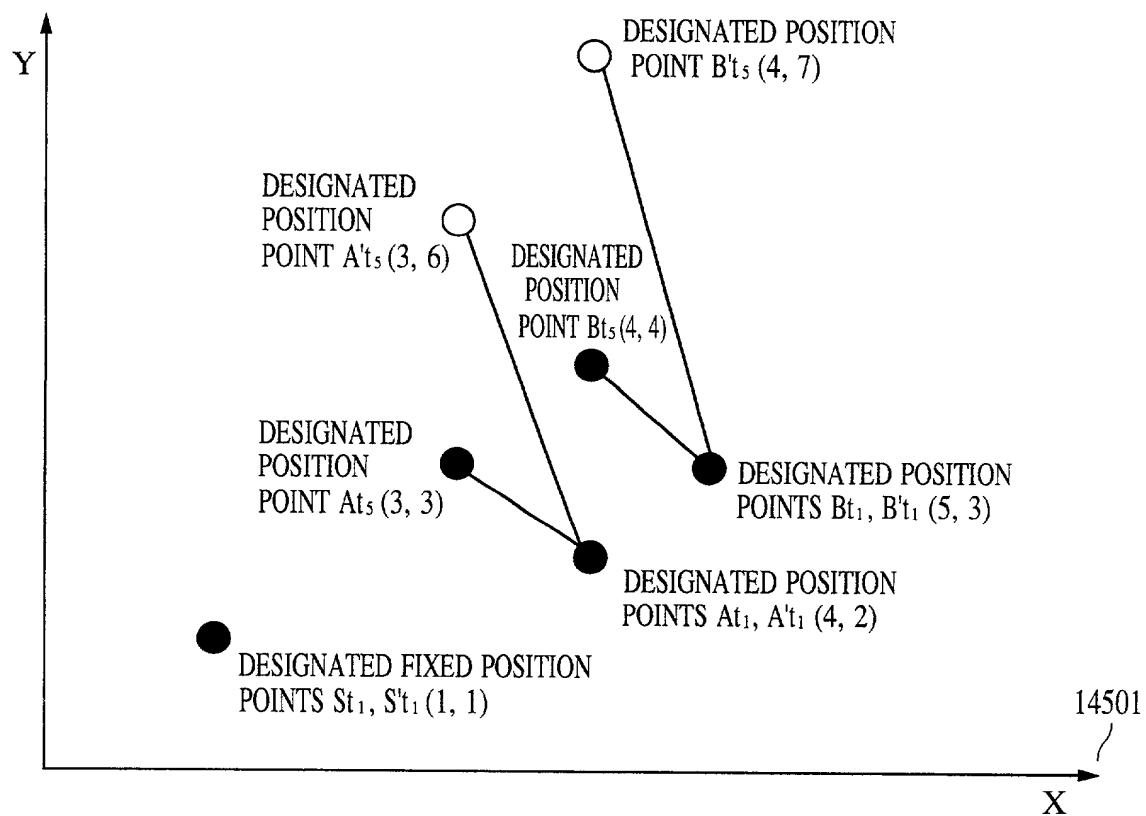


FIG. 145A

DESIGNED  
FIXED POSITION  
POSITION DATA  
OF POINT S

	S <sub>x</sub>	S <sub>y</sub>	A <sub>x</sub>	A <sub>y</sub>
t <sub>1</sub>	1.0	1.0	4.0	2.0
t <sub>2</sub>	1.0	1.0	3.8	2.2
t <sub>3</sub>	1.0	1.0	3.6	2.4
t <sub>4</sub>	1.0	1.0	3.4	2.6
t <sub>5</sub>	1.0	1.0	3.0	3.0

FIG. 145B

DESIGNED  
POSITION  
POSITION DATA  
OF POINT A

	B <sub>x</sub>	B <sub>y</sub>	A' <sub>x</sub>	A' <sub>y</sub>
t <sub>1</sub>	5.0	3.0	4.0	2.0
t <sub>2</sub>	4.8	3.2	3.8	2.8
t <sub>3</sub>	4.6	3.4	3.6	3.6
t <sub>4</sub>	4.4	3.6	3.4	4.4
t <sub>5</sub>	4.0	4.0	3.0	6.0

FIG. 145C

DESIGNED  
POSITION  
POSITION DATA  
OF POINT B

	B' <sub>x</sub>	B' <sub>y</sub>	A' <sub>x</sub>	A' <sub>y</sub>
t <sub>1</sub>	5.0	3.0	4.0	2.0
t <sub>2</sub>	4.8	3.2	3.8	2.8
t <sub>3</sub>	4.6	3.4	3.6	3.6
t <sub>4</sub>	4.4	3.6	3.4	4.4
t <sub>5</sub>	4.0	4.0	3.0	6.0

FIG. 145D

DESIGNED  
POSITION  
POSITION DATA  
OF POINT A'

	A' <sub>x</sub>	A' <sub>y</sub>
t <sub>1</sub>	4.0	2.0
t <sub>2</sub>	3.8	2.8
t <sub>3</sub>	3.6	3.6
t <sub>4</sub>	3.4	4.4
t <sub>5</sub>	3.0	7.0

FIG. 145E

DESIGNED  
POSITION  
POSITION DATA  
OF POINT B'

	B' <sub>x</sub>	B' <sub>y</sub>
t <sub>1</sub>	5.0	3.0
t <sub>2</sub>	4.8	3.8
t <sub>3</sub>	4.6	4.6
t <sub>4</sub>	4.4	5.4
t <sub>5</sub>	4.0	7.0

FIG. 145F

DATA OF DISTANCE OF TRAVEL OF DESIGNATED POSITION

	TRAVEL OF POINT S	TRAVEL OF POINT A	TRAVEL OF POINT B	TRAVEL OF POINT A'	TRAVEL OF POINT B'
t <sub>1</sub>	0	0.000	0.000	0.000	0.000
t <sub>2</sub>	0	0.283	0.283	0.825	0.825
t <sub>3</sub>	0	0.566	0.566	1.649	1.649
t <sub>4</sub>	0	0.849	0.849	2.474	2.474
t <sub>5</sub>	0	1.414	1.131	4.123	4.123

14503

FIG. 145G

DESIGNED  
POSITION  
POSITION DATA  
OF POINT A'

	A' <sub>x</sub>	A' <sub>y</sub>
t <sub>1</sub>	4.0	2.0
t <sub>2</sub>	3.8	2.8
t <sub>3</sub>	3.6	3.6
t <sub>4</sub>	3.4	4.4
t <sub>5</sub>	3.0	7.0

DESIGNED  
POSITION  
POSITION DATA  
OF POINT B'

	B' <sub>x</sub>	B' <sub>y</sub>
t <sub>1</sub>	5.0	3.0
t <sub>2</sub>	4.8	3.8
t <sub>3</sub>	4.6	4.6
t <sub>4</sub>	4.4	5.4
t <sub>5</sub>	4.0	7.0

14502

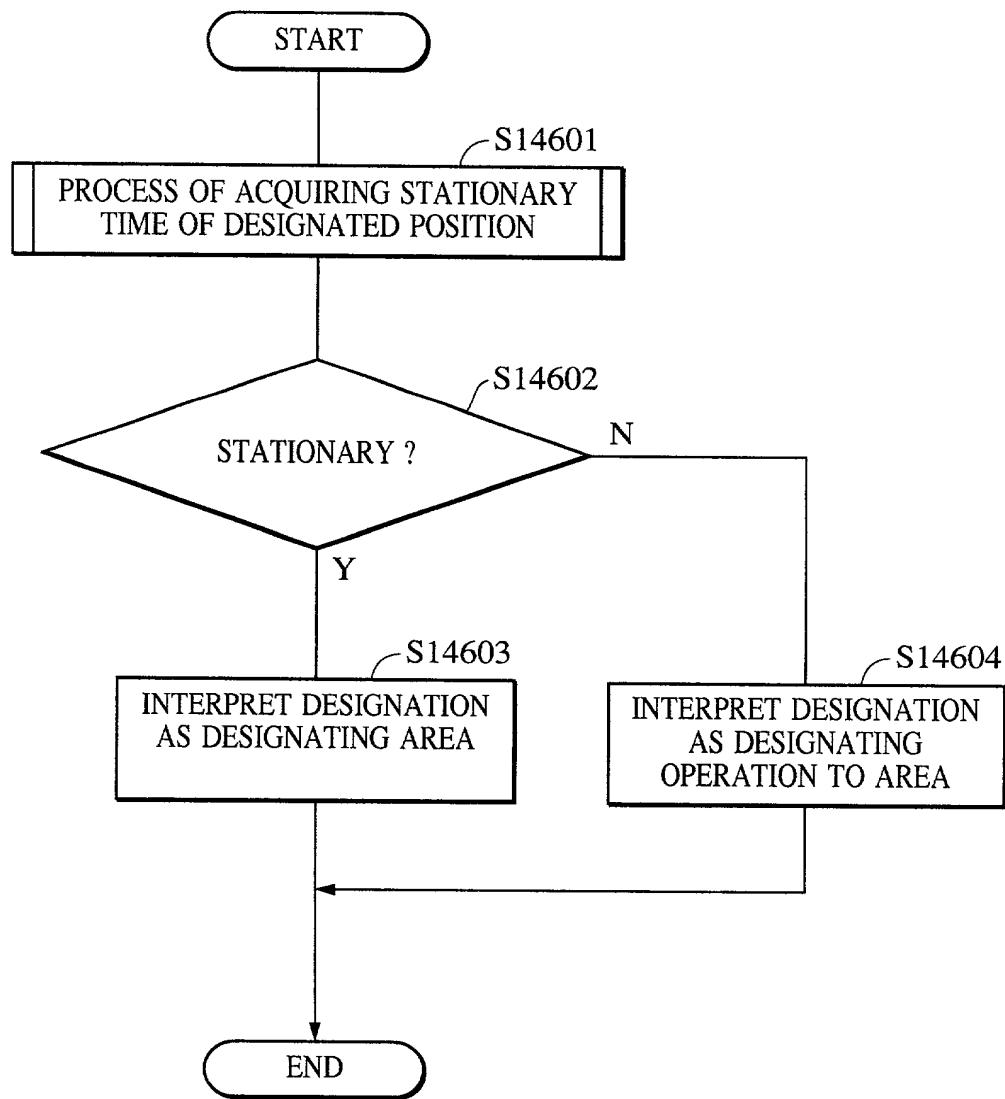


FIG. I46

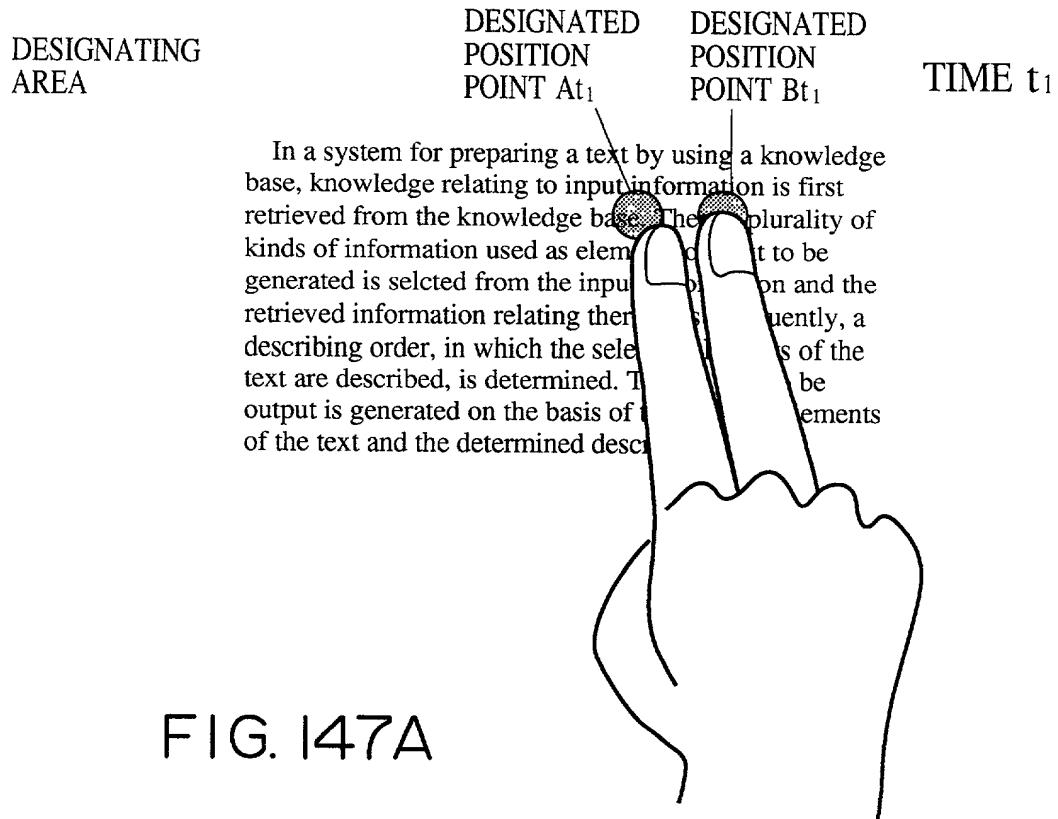


FIG. 147A

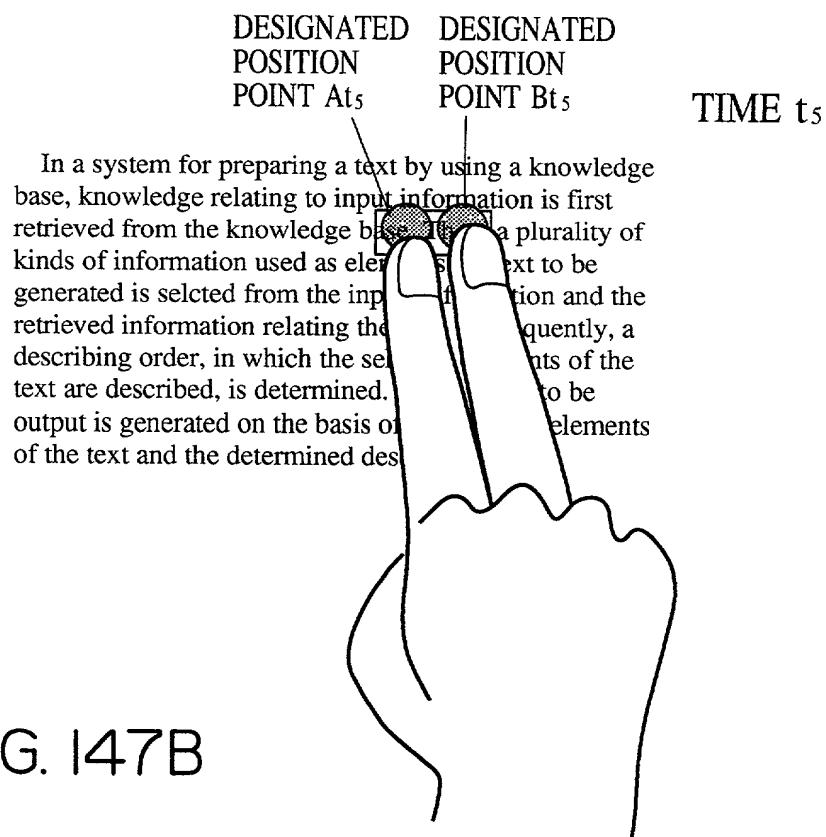


FIG. 147B

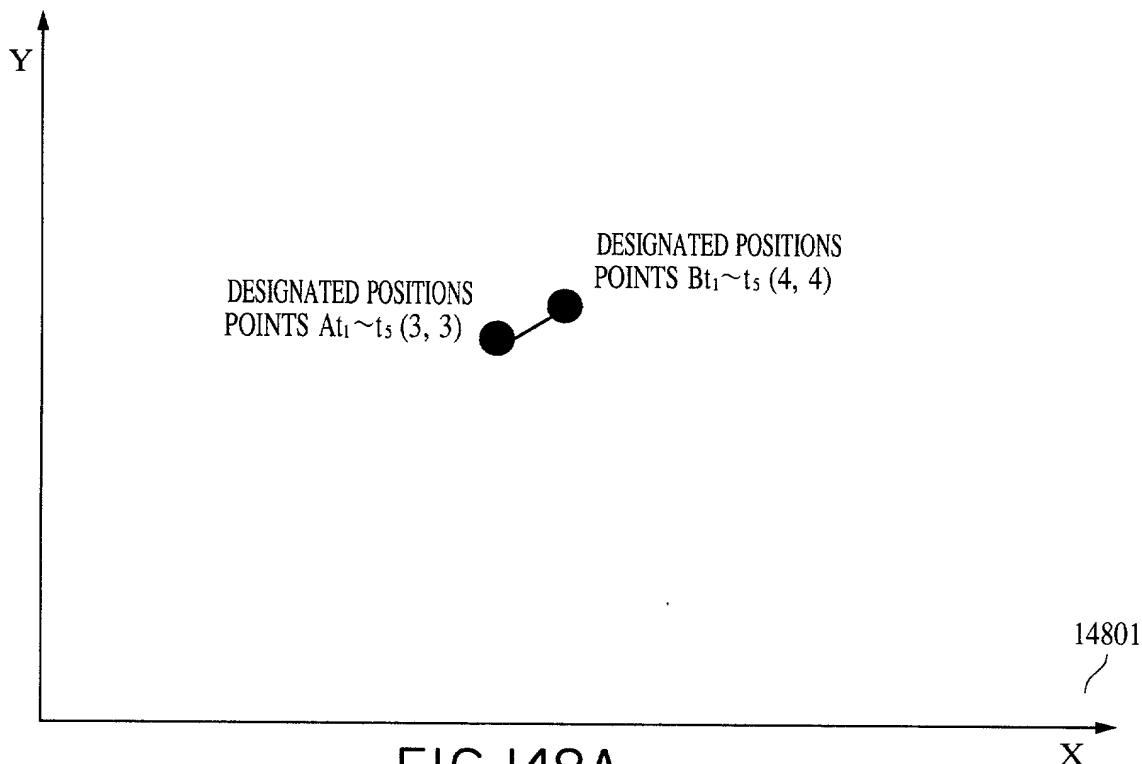


FIG. 148A

DESIGNATED  
FIXED POSITION  
POSITION DATA  
OF POINT A

	A <sub>X</sub>	A <sub>Y</sub>
t <sub>1</sub>	3.0	3.0
t <sub>2</sub>	3.0	3.0
t <sub>3</sub>	3.0	3.0
t <sub>4</sub>	3.0	3.0
t <sub>5</sub>	3.0	3.0

DESIGNATED  
FIXED POSITION  
POSITION DATA  
OF POINT B

	B <sub>X</sub>	B <sub>Y</sub>
t <sub>1</sub>	4.0	4.0
t <sub>2</sub>	4.0	4.0
t <sub>3</sub>	4.0	4.0
t <sub>4</sub>	4.0	4.0
t <sub>5</sub>	4.0	4.0

FIG. 148B

DATA OF TRAVEL OF DESIGNATED POSITION

	TRAVEL OF POINT A	TRAVEL OF POINT B
t <sub>1</sub>	0.000	0.000
t <sub>2</sub>	0.000	0.000
t <sub>3</sub>	0.000	0.000
t <sub>4</sub>	0.000	0.000
t <sub>5</sub>	0.000	0.000

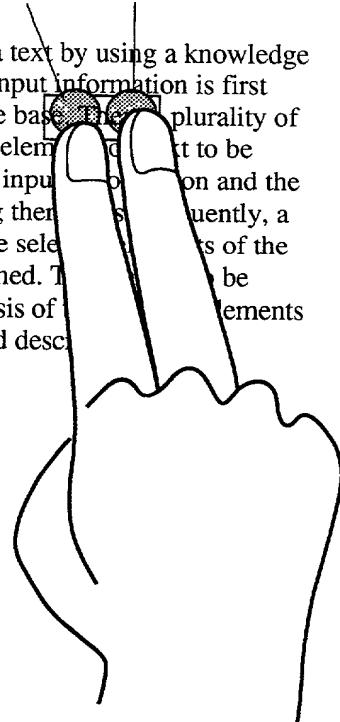
FIG. 148D

EXPANSION  
OPERATION

DESIGNATED  
POSITION  
POINT At<sub>5</sub>      DESIGNATED  
POSITION  
POINT Bt<sub>5</sub>

TIME t<sub>5</sub>

In a system for preparing a text by using a knowledge base, knowledge relating to input information is first retrieved from the knowledge base. The plurality of kinds of information used as elements to be generated is selected from the input information relating thereto. Subsequently, a describing order, in which the selected elements of the text are described, is determined. Then, the output is generated on the basis of the selected elements of the text and the determined describing order.



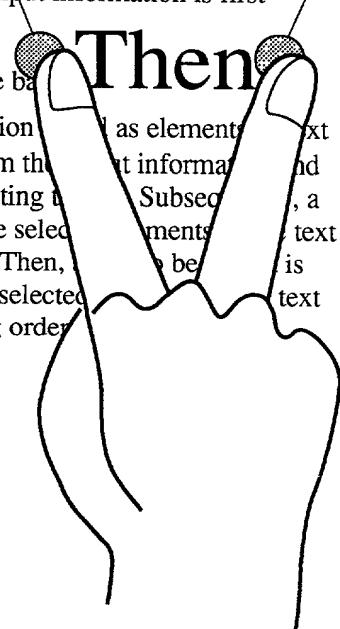
14901

FIG. 149A

DESIGNATED POSITION  
POINT At<sub>6</sub>      DESIGNATED POSITION  
POINT Bt<sub>6</sub>

TIME t<sub>6</sub>

In a system for preparing a text by using a knowledge base, knowledge relating to input information is first retrieved from the knowledge base. The plurality of kinds of information used as elements to be generated is selected from the input information relating thereto. Subsequently, a describing order, in which the selected elements of the text are described, is determined. Then, the output is generated on the basis of the selected elements of the text and the determined describing order.



14902

FIG. 149B

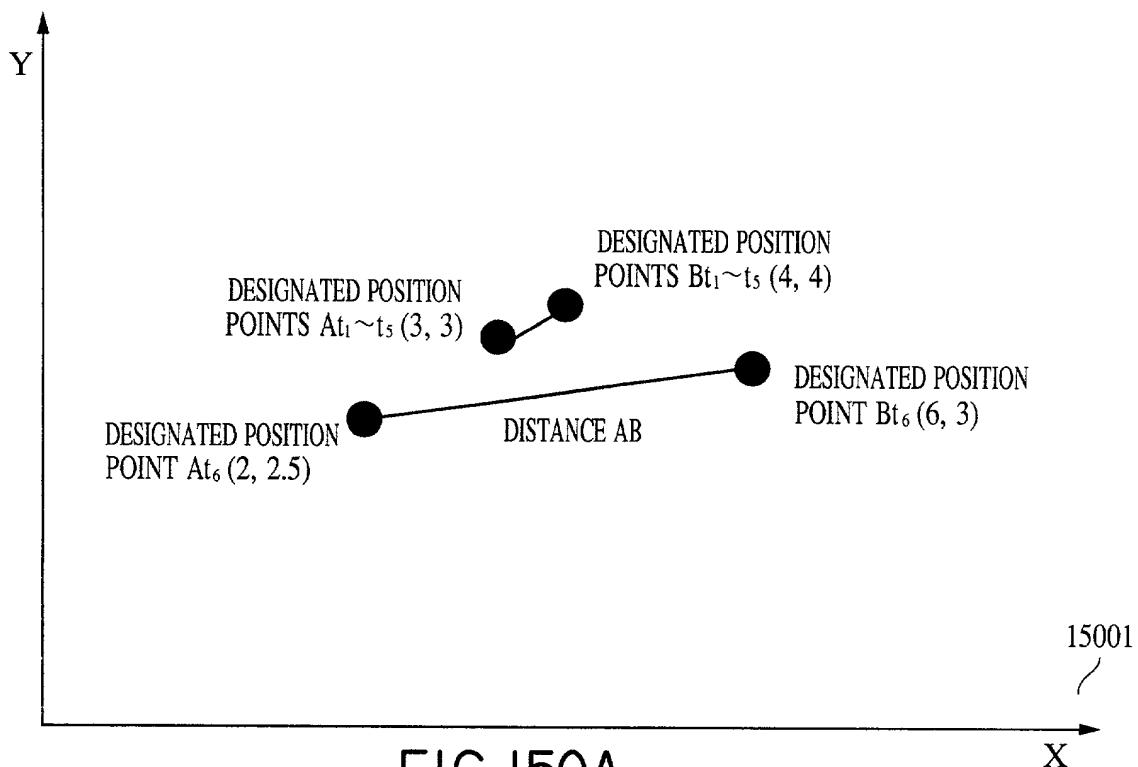


FIG. 150A

DESIGNATED  
MOVING POSITION  
POSITION DATA  
OF POINT A

	$A_x$	$A_y$
$t_1$	3.0	3.0
$t_2$	3.0	3.0
$t_3$	3.0	3.0
$t_4$	3.0	3.0
$t_5$	2.0	2.5

DESIGNATED  
POSITION  
POSITION DATA  
OF POINT B

	$B_x$	$B_y$
$t_1$	4.0	4.0
$t_2$	4.0	4.0
$t_3$	4.0	4.0
$t_4$	4.0	4.0
$t_5$	6.0	3.0

FIG. 150B

FIG. 150C

DATA OF TRAVEL OF DESIGNATED POSITION

	TRAVEL OF POINT A	TRAVEL OF POINT B	DISTANCE AB	DISTANCE CHANGE RATE
$t_1$	0.000	0.000	1.414	100%
$t_2$	0.000	0.000	1.414	100%
$t_3$	0.000	0.000	1.414	100%
$t_4$	0.000	0.000	1.414	100%
$t_5$	1.118	2.236	4.031	285%

15003

FIG. 150D